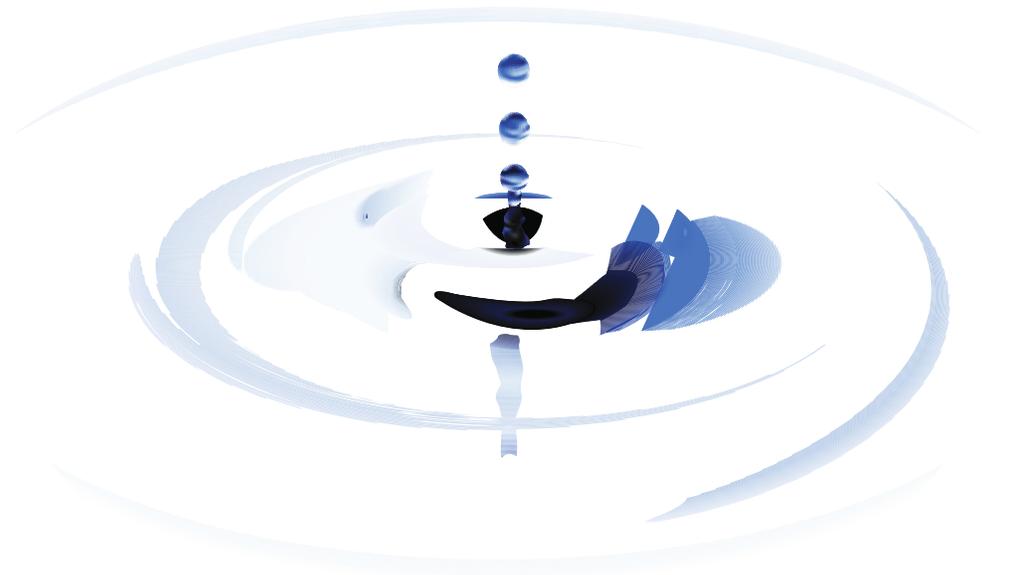




# UNC ENGAGEMENT REPORT 2015

Creating Impact in North Carolina  
Communities and the Economy



Office of International, Community, and Economic Engagement

UNC General Administration

April 2015

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## Introduction: Why Look at Community and Economic Engagement

In developing its past two strategic plans, UNC heard from citizens across the state of North Carolina about what they wanted their public University to be and do. In the preparation of our strategic plan in 2007, “UNC Tomorrow,” we heard people ask us, during 39 public forums, to get more engaged in solving new community challenges our towns and counties and community groups had not faced before – new social service needs, a loss of community, shrinking tax bases, economies facing life “after the factories,” and populations that were, in the words of UNC-Chapel Hill demographer Jim Johnson, “graying and browning.” At the meetings, our citizens called out for a University that could address these real, difficult community challenges.

Doing more and better community and economic engagement means finding ways we can use this engagement to enhance, not compromise, our three part mission of teaching, research and public service.

In 2012, as we prepared for the new strategic plan, “Our Time, Our Future,” we held eight “listening sessions,” with businesses, economic developers and elected officials who were recovering from the toughest recession in 75 years. What they wanted was a University that could deliver economic solutions. They asked that we be a University that discovered new products, processes and services and made it easy for companies in our state to commercialize them, a place that graduated students with the skills they needed to do the job and the habits of mind to help them think their way around challenges they ran into.

Responding to these requests – to get hands-on to address real-world community challenges; to graduate students who have workplace skills and the habits of mind to imagine or create the next big thing – is both old hat for some in our universities and a big new challenge for others.

On the one hand, delivering education that provides value to individuals and the state has been baked into the university’s mission since it was first established in the state constitution, with the charge that the learning we delivered should be “useful.” On the other hand, we are under greater pressure than ever to focus activities in the classroom. Doing more and better community and economic engagement, then, means finding ways we can use this engagement to enhance, not compromise, our three part mission of teaching, research and public service.

## **Development of this report**

At the UNC Engagement Summit in May 2012, UNC President Tom Ross challenged campus engagement officers to work with UNC General Administration's office of International, Community and Economic Engagement to develop a system-wide report that would be the first of its kind in the nation. This report, he said, should provide a means by which UNC could assess its "progress in community engagement and economic development," two critically important and closely interconnected ways in which UNC students, faculty, staff, and alumni contribute to the quality of life in North Carolina.

We wanted to know where we are currently in our efforts to become more closely engaged; what progress we are making over time; and whether what we are doing is making a difference in our communities.

Two separate task forces began meeting to develop a small number of indicators that might enable UNC campuses, over time, to measure their individual progress in community and economic engagement. A "community engagement" task force, chaired by UNC Greensboro professor Emily Janke, director of the Institute for Community and Economic Engagement, was charged with identifying ways in which campuses were responding to the needs of their community, through teaching, research and public service. At the same time, another task force, focusing on "economic engagement" and chaired by UNC Greensboro's Jerry McGuire, their associate vice chancellor for economic development, worked to identify a few indicators that would provide information about how campuses were interacting with outside business and other economic partners. Following several months of meetings, the two task forces were consolidated and developed a consensus strategy for a set of criteria we could use that would provide valuable information about campus efforts to engage with business and community partners.

In January 2013, the UNC Board of Governor's report, "Our Time, Our Future", called for campuses to move forward in identifying and collecting this information.

After a pilot phase collecting data for the first quarter of 2013, criteria were revised. Campuses began collecting data for this report in July 2013 for the fiscal year ending June 30, 2014.

Coming to consensus on which data we should collect was challenging. We can quantify with some specificity the overall "economic impact" of a university, as we did in the February 2015 [report](#) "Demonstrating the Collective Economic Value of the University of North Carolina

System”(finding we had created \$27.9 billion in net economic value, equivalent to 426,052 jobs) and the increment to someone’s lifetime earnings from receiving a four year degree (according to Economic Modeling Specialists, International, \$1,103,440 more, on average, when compared

to someone receiving a high school degree), but there is no consensus national standard for what an “engaged university” looks like and how to quantify its value.

We hope that over time there will be a national consensus about how to assess engagement...in the meantime, we at UNC believe it is important to get started.

We know that the majority of our campuses have been designated “engaged universities” under criteria developed by the Carnegie Foundation and a majority of our campuses have been named to the “honor roll” of the national President’s Higher Education Community Service (presented by the Corporation for

National and Community Service) based on a different set of “engagement” criteria. Ongoing conversations continue at meetings of the Association of Public and Land-Grant Universities about what criteria campuses should use to assess and quantify their ability to engage the community. And while community and public service is now one of the five elements of institutional effectiveness in reaffirmation reports submitted to the Southern Association of Colleges and Schools (SACS) (Standard 3.3.1.5), there is no agreement on how to define, measure or improve university engagement. [Appendix C presents further detail on the rationale behind the final measures.]

Another challenge was funding. Campuses have not collected much of this data in the past, and most had no existing staff or built in mechanisms for collecting it. Decisions about what data to collect, then, were based in part on what would be possible to collect without additional resources. Finally, we must offer a caveat and bit of a disclaimer: As this was our first time collecting much of this data, there may have been misunderstandings about definitions of metrics, terms, etc., at the campus level. While every attempt was made to completely and accurately record and report the data, not all individual counts or total figures may be 100% correct. Thus, these indicators are meant to provide understanding about scope and trends, not to fully capture and describe all related activities, though we expect consistency of data to improve in future reports.

We hope over time there will be national consensus about how to assess engagement, and that there will be support for more sophisticated means of collecting data about it. In the meantime, we at UNC believe it is important to get started. Our first steps, as Janke outlines in *Rekindle*

*and Recapture the Love: Establishing System-wide Indicators of Progress in Community Engagement and Economic Development* (2014), were to create criteria against which to guide the choice of metrics and measures in our larger effort to identify indicators of progress, even as we strive toward painting more complete portraits of our institution's individual and collective contributions. Our communities and our state look to our universities to provide them with smart graduates with strong skills and sharp minds, with insightful faculty and staffers, all with a commitment to engage with our communities in solving some of our state's biggest challenges.

Done right, the work of a university on community and economic engagement creates a "ripple" effect throughout our state, and we become what Albert Coates once described as a "magic gulf stream flowing in an ever-widening current through the lives of people in the cities." It ripples through the lives of people in our universities as well. Studies show that, done right, engagement helps students learn better, leading to improved retention, degree completion, connections to faculty, participation in community service following graduation and other outcomes. This report represents a first attempt to begin trying to focus our engagement and do it right.

The University is a "magic gulf stream flowing in an ever-widening current through the lives of people in the cities."

Albert Coates, "What the University of North Carolina Meant to Me," 1969

## Executive Summary

If universities ever were “ivory towers,” intimidating citadels walled off from the surrounding community, they aren’t anymore. Access has gotten easier.

Range has been extended.

It had to happen. These days, universities are expected not just to educate 18-24 year olds on campus about static sets of printed page subject matter, but to provide lifelong learning opportunities to students of all ages in dynamic engaged learning, blending theory and application about a dynamic, relentlessly expanding world. We are asked not only to conduct fundamental research and produce scholarly thinking that expands the bounds of knowledge, but to translate that research into new products, processes and technologies and to apply that knowledge to solve immediate challenges our businesses and communities face. And we are asked not just to take on public service projects that we learn from, but to collaborate with communities to learn and work together.

By national measures, UNC campuses appear to be measuring up well in community and economic engagement.

The University of North Carolina system’s campuses are doing all that. Consider:

- UNC performs community engagement projects, extension work, and business consulting projects in every county of the state;
- The *average* age for UNC’s enrolled students is nearly 24 years old;
- More UNC “students” are taking continuing education courses than traditional credit-bearing courses;
- UNC interacts with more than 6 million North Carolinians each year, only 220,000 of whom are full-time students.

By the national measures that we have, UNC campuses appear to be measuring up well in community and economic engagement. Twelve campuses (Appalachian State, East Carolina, Elizabeth City State, NC A&T State, NC Central, NC State, UNC-Chapel Hill, UNC Charlotte, UNC Greensboro, UNC Pembroke, UNC Wilmington and Western Carolina) are currently [recognized by the Carnegie Foundation](#) as “engaged universities,” a recognition of how well they collaborate with outside constituencies and community representatives, tying the California State System for the largest number of universities. Ten campuses were recognized this year (East Carolina, Fayetteville State, NC Central, NC State, UNC-Chapel Hill, UNC Charlotte, UNC Greensboro, UNC Pembroke, UNC Wilmington and Western Carolina) on the national President’s Higher Education Community Service [Honor](#) Roll for their “exemplary community

service.” East Carolina’s “[Middle School Innovators Academy](#),” NC State’s “[Backpacks to Briefcases](#)”, and the UNC system’s “[REACH NC](#)” have won awards from the national [University Economic Developers Association](#) for their projects connecting their universities to the needs of the broader economic development community.

But while a number of organizations are attempting to develop a set of national standards to assess community engagement, there is no consensus on what those standards should be. Universities collect data episodically in preparation for seeking new grants, recognition or accreditation, but not consistently.

This report represents the beginning of an effort launched by UNC President Tom Ross, championed by the UNC Engagement Council and UNC Economic Transformation Council and endorsed by the UNC Board of Governors in its strategic plan, “[Our Time, Our Future](#),” which asked UNC to develop an “Annual Engagement Report.”

## Report Findings

### 1. Teaching: Getting students ready to hit the ground running

For students in for-credit courses, UNC campuses are balancing teaching specific skills and specific sets of knowledge with preparing students to move into a world of constant change. Through “applied learning” experiences and “entrepreneurship” courses and opportunities, universities are working to get students ready to “hit the ground running” following graduation and to be ready when the destination changes. In health care and education, campuses are responding to known “demand” through degree programs.

*Developing applied learning opportunities:* In response to requests from businesses across the state, “Our Time, Our Future” proposed that UNC receive support for efforts to spur “growth in experiential learning opportunities for students...prior to their graduation.” While there has been no funding support for these efforts, campuses are offering a number of courses that provide students and faculty opportunities to interact with corporate, business, nonprofit and government entities in settings that provide students hands-on opportunities to apply what they are learning outside the classroom. In 2013-2014, there were 65,277 enrollments in such classes at UNC.

*Creating entrepreneurial graduates:* To better prepare students for an uncertain future, in the past seven years, UNC campuses have increased their capacity to enable more

students to learn the basic principles of entrepreneurship. In 2013-2014, nine campuses offered majors, minors, master's or certificates in entrepreneurship and 365 students received these degrees. Perhaps more importantly, twelve campuses have developed organized entrepreneurial initiatives to connect students and faculty to information, courses, practical experience or investment opportunities.

*Meeting demand in the growth sectors of health care and education:* The number of people UNC is producing in two of our state's most important job sectors, health care and education, has changed over the past five years. In health care, the number of people graduating with health care degrees is up 26% among undergraduates, 20% among master's students and 17% for those with doctoral degrees. According to a new database available through the NC Department of Commerce (which does not track federal employment, self-employment or out of state employment), 79.4% of UNC undergraduate health care degree holders are working at North Carolina organizations a year after graduation, and 57.3% of those are working at health care-related concerns in the state. Among UNC graduate health care degree holders, 64.2% are working in North Carolina a year after graduation and 41% are working specifically in North Carolina health care-related jobs. Percentages vary by campus, but it is worth noting that at Winston-Salem State, 76.5% of undergraduate health care degree holders and 66.7% of graduate health care degree-holders work in North Carolina health care-related entities a year after graduating.

As the Board of Governors has [noted](#), the number of UNC students receiving teacher licensure has declined significantly over the past five years with greater drops among currently-enrolled students. NC Department of Commerce data shows that graduating students with degrees in education are highly likely to work in education in North Carolina: about 75% of undergraduate and graduate degree holders are working in the field of education in North Carolina schools and companies within a year of graduation. Another 12% of those degree holders are working in North Carolina companies, in some cases performing educational functions. Students with undergraduate education degrees from UNC Pembroke most often match degrees to jobs in the state (82.8% work in NC

“We must never lose our clear focus on the University’s duty to contribute to the common good, to develop leaders for our communities and to serve those communities in ways that enhance the quality of life for the people who live in them.”

UNC President Tom Ross,  
inaugural address, 2007

education jobs) and Elizabeth City State University students with education graduate degrees most often match (92.7% working in NC education jobs).

## **2. Research: The Impact of UNC Research on North Carolina's Economy and Communities**

Every year since 2003, UNC has performed more than \$1 billion in sponsored research. Much of that research is closely tied to sectors essential to our state's economic future, and increasing amounts of that research are being done in partnership with North Carolina government, organizations and businesses.

*Targeted research investment.* UNC is working closely with economic development and governmental entities to increase the amount of research on topics identified as being particularly important to North Carolina's economic future. The most recent example is the Research Opportunities Initiative (ROI), recommended in "Our Time, Our Future" and funded by the General Assembly to provide support for "game changing research" in advanced manufacturing, coastal and marine science, data science, defense, energy and pharmacoengineering. But UNC system faculty members are doing research in a variety of fields important to the state, performing more than \$300 million worth of research in FY 2013-2014 in both biological sciences and health professions and more than \$85 million each in engineering, education and agriculture. Beyond this, new steps to commercialize research through individual campus initiatives and Gov. McCrory's "Innovation to Jobs Task Force" are well under way.

*Research investment in the community.* As part of this report, the UNC Office of Research and Graduate Education collected new data to determine what portion of research was targeted toward "community engagement" or North Carolina-based institutions. Campus reports indicate that during 2013-2014, about 20% of UNC research projects involved some sort of collaboration between UNC and their "communities" for mutual benefit.

During the same time period, UNC campuses reported receiving nearly \$96 million in research funding from state government and another \$6 million from local government entities; \$75 million from North Carolina foundations, associations and nonprofits; and \$97 million from businesses, about \$22 million of which comes from North Carolina businesses.

## **3. Public Service: Building the 'Communiversities'**

UNC campuses are bringing their work closer to the community. Universities conduct community projects in every county, bringing together thousands of faculty students and community members each year to work together to solve community challenges. State-serving university entities touch millions of citizens and help thousands of community

University-community projects reported by campuses included about 25,000 community members, 55,000 students and 2,000 faculty and staff.

groups and businesses annually. And continuing education programs bring university expertise to hundreds of thousands of North Carolinians annually, both face-to-face and online.

*University-community partnerships:* We asked campuses to report between 15 and 25 community-university partnerships that were active during FY 2013-2014. The partnerships campuses highlighted involved work in all 100 counties, with

Cumberland, Guilford, Durham, Mecklenburg and Robeson counties most frequently mentioned, each with at least 30 such efforts. The projects reported included about 25,000 community members, 55,000 students, and 2,000 faculty and staff, and involved all three parts of the university's mission: teaching, research and public service. The areas of focus for these projects were most often work with nonprofits and educational institutions, followed by partnerships with government and business.

*Work performed by state-serving entities:* There are hundreds of initiatives underway on UNC campuses that focus on addressing regional needs.

This report focused attention on five larger "state-serving" entities: the Cooperative Extension Service, the Industrial Extension Service, the North Carolina Area Health Education Centers, the School of Government, and the Small Business and Technology Development Center (SBTDC)

These entities serve literally millions of North Carolinians. Cooperative Extension tracked more than 6 million citizen contacts last year and nearly 600,000 people participated in their noncredit degree programs in agriculture, food and 4-H youth development. Industrial Extension worked with small- and medium-sized manufacturers in 44 counties to help them revise their processes and increase productivity. The North Carolina Area Health Education Centers trained, supported and placed more than 280,000 health care professionals throughout the state. The UNC School of Government offered 186 different courses to more than 16,000 North Carolina public officials last year and responded to more than 15,000 phone calls. The SBTDC helped 6,856 clients in all 100 counties start up or expand:

developing business plans, increasing exports and access to markets, getting management training, and creating or retaining jobs.

*Noncredit education:* Other entities throughout the system deliver a range of other courses that help people acquire new skills and knowledge that make them more productive workers, volunteers or community members. Last year, UNC campuses delivered more than 7,000 continuing education courses – either face-to-face or partially online - with more than 923,000 enrollments, with course times built around the needs of the community. An increasing number of these courses are delivered online: last year there were more than 466,000 enrollments in these online courses alone.

Last year, face-to-face or partially online continuing education courses at UNC had 923,000 enrollments; an additional 466,000 enrollments in continuing education courses were completely online.

## Report recommendations

1. Continue listening to and responding to the needs of the workforce and the community in developing curriculum.
  - Develop strategies to more effectively count experiential learning activity
  - Expand experiential learning opportunities
  - Encourage continued expansion of entrepreneurial opportunities for students
  - Work with state leaders to expand UNC responsiveness to workforce needs in key economic sectors
2. Expand community connections in research
  - Support research on important sectors of the North Carolina economy through expansion of the ROI program
  - Encourage campuses to continue to increase industry-sponsored and community-based research by UNC campuses
  - Support the translation of research for community and economic benefit
3. Build quality and number of community-university collaborations and noncredit courses
  - Improve information collection methods for university-community partnerships to ensure awareness of these partnerships on campus, among community partners and between campuses
  - Invite state-serving engagement entities to present to appropriate Board of Governors' committees regularly

- Improve awareness and visibility of noncredit education at UNC
- Continue to support UNC Engagement Council efforts to collect data , leverage resources, and communicate findings to improve campus engagement

### **The future of reporting in these areas**

The report, the result of more than two years of discussions and work by UNC campuses, doesn't answer all questions about engagement by our campuses with their communities, but it does provide some preliminary insights about which efforts we believe are important, and sets the stage for campuses to be able to compare their efforts year-to-year, to set goals and standards and, over time, to compare themselves to peer institutions. It also is intended to give the citizens, communities and companies we serve additional information about the variety of ways our universities can work with them.

## Chapter 1: Getting Students Ready to Hit the Ground Running

As the state continues its transition from a manufacturing-intensive economy to a knowledge-intensive economy, and communities struggle to meet the needs of citizens more efficiently, universities are being asked to play a bigger role than ever. Employers want universities to prepare graduates ready to “hit the ground running” immediately following graduation. Communities want UNC to help them develop new models to address the challenges they face, both persistent and new. To meet those needs, universities are bringing some parts of the academic enterprise closer to the community.

But the university is also looking for new ways to carry out a dual purpose: to make sure people have both specific skills that enable them to be productively responsive to known workforce demands; and the creative and analytical skills they will need to help address the unknown challenges they and their communities will face in the future.

This chapter examines some of the data for how UNC campuses are responding to the modern-day challenges of “community and economic engagement”: by increasing availability of experiential learning, by offering more opportunities for students to learn entrepreneurial skills, and by preparing students in specific degree areas where demand is known.

### A. Getting Involved in Hands-on Learning

UNC’s “Our Time, Our Future” calls for campuses to explore ways to increase campus-based and externally-based “experiential internships” and the number of students who arrive in the workplace “job-ready.”

It’s not hard to see why.

Done right, experiential learning – whether through internships, coop programs, student teaching experiences, medical clinical work, or collaborative projects -- is win-win.

In *How College Affects Students: A Third Decade of Research*, Pascarella and Terenzini (2006) performed meta-analysis of over 2,600 studies, revealing that interactions between students, faculty and community in collaborative learning opportunities help deepen students’ academic and civic learning, enhance community well-being, and enrich the scholarship of the institution. Students and faculty get a chance to test out what they have been teaching and learning in the classroom in “real world” settings. Community, nonprofit and government leaders, plus established businesses and startups, can all get an early look at potential future employees

and immediate access to smart, energetic minds who may bring a different perspective to a project.

As noted by Whitman and Crews in *Engaged learning economies: Aligning civic engagement and economic development in community-campus partnerships*, provided they participate over a period of time, reflect on what they learn and connect academic concepts to applied learning, students who take advantage of experiential learning opportunities tend to have higher degrees of academic engagement, higher GPAs, greater clarity about their careers, even deeper connections to faculty. Many end up working with or volunteering for the organizations that they learn with. Some employers even say they have started to hire “only” employees who come to them first as interns.

In this year’s survey we looked at two different levels of coursework that bring students into contact with business and other community members.

### **Community-based courses at UNC**

All campuses, with the exception of the UNC School of the Arts, offer courses for credit that bring students into contact with community partners. These “community-based” courses take on a variety of forms:

- Internships, field experience or cooperative education: students gain academic credit through participation in a partnership, professional employment, work experience or

## **“OUR TIME, OUR FUTURE,” ON EXPERIENTIAL LEARNING**

“Responding to employer demands for graduates with more applied experiences, UNC should form a partnership with businesses across the state to support growth in experiential learning opportunities for students (internships, coops, student teaching, clinical experiences, service learning and collaborative research) prior to their graduation and should promote development of increased campus-based experiential learning opportunities. The system should also work with campuses to create a statewide portal for industry-sponsored internships and co-ops and better integrate career counseling and academic advising. This effort should provide valuable assistance to the private, public and nonprofits sectors and better prepare students for the workplace.” (page 69)

While this activity has not moved forward due to lack of funding, the rationale remains strong: as Nancy Hoffman notes in her book [Schooling in the Workplace](#), “excellent but scattershot activities for young people do not constitute a system.” To increase the number of non-academic internships, campuses will discover that a high percentage of students have existing jobs that are helping them get through college, even if the jobs are not in their major degrees of study. Convincing students to take on internships will be easier if these opportunities can replace some or all of the nonacademic incomes students are losing.

cooperative education with an entity external to the university, generally under the supervision of an employee of the external entity.

- Student teaching: students teach at an entity external to the institution, generally as a capstone to a teacher education or certification program.
- Practicum: students apply classroom theory to a “real world” project, under the supervision of an expert or qualified representative of the field, generally producing analysis or recommendations.
- Clinical instruction: students test, observe, experiment or practice in a medical or healthcare-focused field or discipline in a hands-on or simulated environment.

In academic year 2013-2014, tens of thousands of students participated in these activities across the system, as shown in Table 1A. The greatest number of these courses are at UNC-Chapel Hill and NC State, but there are also proportionately high numbers at both UNC Greensboro and Western Carolina.

**Table 1A: Enrollments in Community-Based Academic Learning by Campus (Academic Year 2013-14)**

Campus	Students	Campus	Students
ASU	4,445	UNCC	3,243
ECSU	174	UNC-CH	11,522
ECU	7,320	UNCG	9,119
FSU	589	UNCP	1,912
NC A&T	421	UNCW	2,424
NCCU	3,530	WCU	8,254
NCSSM	148	WSSU	1,366
NCSU	9,787	Total	65,277
UNCA	1,023		

Note that these reported figures do not capture all of the community-based activity that students and faculty are engaged in, but rather the activity that is academically-based. Campuses do not currently have mechanisms that enable them to track, for example, students involved in paid or unpaid internships that are not generating academic credit.

Over time, we hope to be able to look at campus activity longitudinally, to enable campuses to discern increases or decreases, and to get further nuance about the different kinds of

community-based courses students are taking. As other universities nationally begin to measure this, campuses can compare their activity in these areas to that of their peers, and best practices for encouraging more community-based learning can be developed.

### **Community-engaged courses at UNC**

Community-*engaged* learning is a subset of community-*based* learning, and refers to courses that are even more intensively focused on public service and community-driven outcomes. In its 2015 criteria, the Carnegie Foundation notes that community-engaged courses bring together faculty, students, staff and the community in “mutually beneficial and respectful collaboration.” Typically these courses are conducted through connections to governmental, nonprofit or other community organizations.

Many campuses do not distinguish these courses, sometimes called “service learning” or “public service” courses, from the broader set of community-based courses. As a result, only twelve campuses provided information in this voluntarily-reported category. They are shown in Table 1B. Again, NC State and UNC-Chapel Hill have the greatest number of these courses, but both UNC Greensboro and NC Central offer a high proportion of courses relative to their size.

**Table 1B: Enrollments in Community-Engaged Academic Learning by Campus Academic Year 2013-14**

<b>Campus</b>	<b>Students</b>	<b>Campus</b>	<b>Students</b>
ASU	1,610	UNCA	591
ECSU	7	UNC-CH	2,420
ECU	1,538	UNCG	2,249
FSU	1,298	UNCP	896
NC A&T	179	WCU	462
NCCU	2,160	Total	19,180
NCSU	4,232		

As with the reporting of community-based courses, while these figures reveal that there is a good deal of activity in these sorts of courses on many of our campuses, they don’t provide much deep insight without longitudinal or comparative data. Our hope is that in the future we can compare an individual campus’ activity over time to discern trends, develop more uniform

## GETTING HANDS-ON WITH FOOD SCIENCE

ASU's Bachelor of Science in Nutrition and Foods from their College of Health Sciences' (CHS) Department of Nutrition and Health Care Management includes a robust Nutrition and Foods Internship course. Students in both the Dietetics and Foodsystems Management concentrations complete a 400 hour internship, which earns them eight credit hours and valuable hands-on experience in their field. Many businesses, organizations, agencies and institutions provide these internship opportunities through affiliation agreements, and students typically undertake the internships in the summer. Host sites include the following: Extension services; Hospitals and other healthcare settings; Public health agencies; Schools and colleges; and Wellness programs.

criteria for reporting, and connect campuses to national and international data sets analyzing such courses on campus.

Community-engaged and community-based courses offer students a chance to apply what they have learned, to return to the classroom with increased energy, and to enter the workforce with workplace or community experience that is highly valued. Campuses looking to increase the number of opportunities they offer will face some obstacles, including the initial time investment in forming relationships with employers, community groups, nonprofits or governmental organizations.

### B. Educating for Uncertainty

If community-engaged learning helps prepare students for a successful work life and a rich community life, training in entrepreneurship prepares students for the volatility of the world they are graduating into, and gives them some of the skills they will need to reinvent themselves and the world as it changes.

It's simply not possible to predict the jobs or problems of tomorrow in most areas.

The world is changing at lightning speed, no matter what sector you are working in or helping in.

In its current “[guiding principles](#)” document, for example, the

US Army Combined Arms Center puts its educational challenge this way: “We must train our

“Our universities need to emphasize entrepreneurship and leadership across all disciplines both inside and outside the classroom...The spirit and skills of entrepreneurship should be infused across disciplines, working with businesses and communities.”

2006 BOG Special Committee Report on Community and Economic Development

graduates on enduring doctrinal principles, emerging lessons, and the skills they will require in their career. We must educate our graduates for the uncertainty they will surely encounter; they must know how to think and apply critical reasoning and creative thinking in complex ambiguous situations.”

Educators can no longer afford to just teach specific skills. As Colorado school teacher Karl Fisch noted in his viral 2006 YouTube presentation, “[Shift Happens](#),” the challenge for educators is “we are currently preparing people for jobs and technologies that don’t yet exist in order to solve problems we don’t know are problems yet.”

In conversations with business leaders in December 2012 to inform the recommendations of “Our Time, Our Future,” we asked them which skills they thought would be most important for their employees to have in ten years. As shown in Table 1C, they identified “adaptability” to changing environments and “learning agility” as among the top three most important competencies they were looking for from college graduates.

## STUDENT-FOCUSED ENTREPRENEURSHIP

Fayetteville State’s Center for Entrepreneurship is currently striving to become a national hub for minority entrepreneurship and a leader in innovation training. Their annual Youth Entrepreneurship Conference focuses on high school and college students, to assist them in developing the confidence and skills they need to start entrepreneurial careers. One early sign of success: This year both their undergraduate and graduate student teams were selected as winners at the UNC Social Entrepreneurship Conference.

**Table 1C: UNC Listening Session Employer Survey, December 2012**

Most important competencies 10 years from now	
Adaptability/versatility	29%
Communicate effectively	26%
Learning agility	24%
Multicultural awareness	22%
Self-motivation/discipline	20%
Collaboration	20%

There is an ongoing balancing act that universities must play. They must teach a specific set of competencies that a student must have in order to know his or her field, but they must also

teach people to think in new ways, to bring in insights and perspectives from other fields, to analyze and create.

Employers want both. Red Hat CEO Jim Whitehurst summarized this perspective in announcing the “Jobs Plan” of the NC Economic Development Board in 2014: “The state needs (educational institutions) that can do two things: produce graduates with the skills to go to work for companies like mine – you can’t stop doing that – but also they need to produce ‘creatives’ – the kind of people that will create the new enterprises of tomorrow.”

### **Graduates with entrepreneurship credentials**

Equipping students with critical thinking skills to enable them to analyze and create new ways of thinking is a core function of universities, and new efforts to strengthen general education curricula focus on further developing those skills.

But there is also value in developing entrepreneurship skills. Beginning in 2006, the UNC Board of Governors has called for more emphasis on these competencies.

In the past decade, 12 campuses have developed programs to encourage and support entrepreneurship among students, faculty, staff, and, in some cases, communities. Eight are called “centers” and the remaining four are considered “initiatives.” All provide opportunities for students to learn about basic business principles and entrepreneurial thinking.

- [ASU's Transportation Insight Center for Entrepreneurship](#)
- [ECU's Entrepreneurial Initiative](#)
- [FSU's Center for Entrepreneurship](#)
- [NCATSU's Interdisciplinary Center for Entrepreneurship and E-Business \(ICEEB\)](#)
- [NCSU's Entrepreneurial Initiative \(EI\)](#)
- [UNCC's Ventureprise](#)
- [UNC-CH's Carolina Entrepreneurship Initiative \(CEI\)](#)
- [UNCG's North Carolina Entrepreneurship Center \(NCEC\)](#)
- [UNCP's Thomas Family Center for Entrepreneurship \(TFCE\)](#)
- [UNCW's Center for Innovation and Entrepreneurship \(CIE\)](#)
- [WCU's Center for Entrepreneurship and Innovation \(CEI\)](#)
- [WSSU's Center for Entrepreneurship \(CFE\)](#)

Through these entrepreneurship-focused efforts, students have a variety of ways to connect to

entrepreneurial opportunities,- from hearing entrepreneurs speak on campus to preparing business ideas in campus “pitch” competitions to interning with startups. The annual UNC Social Entrepreneurship Conference brings together students from all 17 campuses who present ideas before a panel of judges focused on developing creative solutions to community problems.

Table 1D shows the nine UNC campuses that have moved to recognize students for entrepreneurship skills with some sort of formal educational program, including majors, minors, certificates, concentrations or graduate degrees. Among campuses that don’t offer these degrees, there are at least opportunities to take individual courses. For example, the NC School of Science and Math offers two courses in entrepreneurship with 53 students enrolled in academic year 2013-2014.

**Table 1D: UNC Campuses with Formal Entrepreneurial Education Graduates AY2013-2014**

	Major	Minor	Concentrations	Certificates	ME*
FSU			6		
NCA&T	5			32	
NCSU		8	24	1	
UNCC				24	
UNC-CH		69	36**		
UNCG	24	12			
UNCP		1	3	14	
UNCW	30		21		
WCU	43	3			9
Total	102	93	90	71	9

\*Master of Entrepreneurship (on-line program)

\*\*30 of UNC-CH’s entrepreneurship concentrations were in their MBA program.

Western Carolina offers the UNC system’s only master’s of entrepreneurship program, an online offering which had 9 graduates in 2013-2014.

Going forward, it is clear that we need to get better at capturing and describing campus entrepreneurial activity in a meaningful way. Degrees serve as a proxy, but miss the nuance of

activity on an individual campus. For example, even though 33 students at NC State graduated during 2013-2014 with entrepreneurship minors, concentrations or certificates, 225 students worked in the “[Entrepreneurship Initiative Garage](#).” Of those 72% reported they had either launched or planned to launch a venture within the next five years. Another 100 students participated in the [Entrepreneurship Initiative eGames](#) in 2014. Three different student entrepreneurship organizations count 200 students as members and 600 students have signed up to receive updates on those organizations. Counting only academic credentials invariably misses broader activity.

### C. Educating for Specific Professions

Knowing that any graduating student is moving into a volatile world marketplace does not mean that we can’t make informed guesses about some of the jobs that will be important in the future. Each year, degree programs are created and abolished on every campus in response to student and workforce demand. In the past decade, for example, a series of new professional science master’s programs have been created through close conversations between universities and employer groups to meet demand for emerging skillsets. Thirty-nine percent of our students take [at least some of their courses online](#), at least in part to enable them to access courses they know they need which may not be offered by their home campus.

But there are some degree programs about which there is clear consensus and persistent demand. For this report, we take a closer look at two of those fields: health care and education.

#### **Health Care**

Health care jobs already make up [more than 11% of all US jobs](#). According to the [US Department of Labor](#), over the next decade, the sector is expected to get even bigger, with nearly 5 million new jobs in the sector nationally. One third of all new US jobs over the next decade, and 14 of the top 30 occupations, will be in the health care sector.

In its three years, the [UNC Social Entrepreneurship Conference](#) has brought together more than 1300 students, faculty, staff and community members for an annual student case competition. More than 100 student teams have visited with community members, and then developed business plans outlining how they would address a “significant community problem” using a new approach. With ideas including new ways of delivering social services and food, new strategies to prevent sexual assault, and new ways to recycle Styrofoam and hog waste, the main goal is to get students accustomed to solving problems in creative ways.

UNC plays a key role in preparing people to meet those needs in North Carolina. Degrees considered “health” related are those that prepare individuals to practice as licensed professionals and assistants in the health care professions and related clinical sciences or administrative support services. As Table 1E indicates, between 2009-2010 and 2013-2014, despite the recession, UNC campuses consistently increased the number of people graduating at each level, with a total of 16,467 people receiving undergraduate health degrees, 7,364 receiving master’s in health fields, 3,555 receiving doctoral- level degrees and 535 receiving other health-related credentials. East Carolina and Winston-Salem State graduated the greatest number of students with undergraduate credentials, while UNC-Chapel Hill and East Carolina graduated the greatest number of those with graduate degrees.

**Table 1E: Health Degrees (CIP 51) Conferred by UNC by Level, 2009-2014**

	UNDERGRADUATE					MASTERS				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
<b>ASU</b>	174	165	215	239	309	54	66	62	69	66
<b>ECU</b>	615	635	669	697	693	333	373	387	386	384
<b>FSU</b>	34	9	43	75	83	.	.	.	.	.
<b>NCA&amp;T</b>	57	52	44	67	52	.	.	.	.	.
<b>NCCU</b>	66	94	78	126	112	34	51	38	47	54
<b>NCSU</b>	3	.	.	.	.	3	5	1	2	4
<b>UNC-A</b>	41	35	52	39	45	.	.	.	.	.
<b>UNC-CH</b>	421	379	387	385	333	411	444	501	528	521
<b>UNC-C</b>	269	239	303	267	330	99	129	128	115	130
<b>UNC-G</b>	259	284	310	410	326	144	157	147	156	162
<b>UNC-P</b>	72	48	47	51	66	.	.	.	.	.
<b>UNC-W</b>	174	190	223	244	269	2	23	17	13	34
<b>WCU</b>	242	259	252	271	357	90	117	102	124	87
<b>WSSU</b>	544	631	593	652	762	125	85	130	125	99
<b>UNC Total</b>	2971	3020	3216	3523	3737	1295	1450	1513	1565	1541

	DOCTORATE					OTHER				
	2009-10	2010-11	2011-12	2012-13	2013-14	2009-10	2010-11	2011-12	2012-13	2013-14
ASU	.	.	.	.	.	.	.	.	.	.
ECU	104	108	107	113	124	22	60	106	106	125
FSU	.	.	.	.	.	.	.	.	.	.
NCA&T	.	.	.	.	.	.	.	.	.	5
NCCU	.	.	.	.	.	.	.	.	.	.
NCSU	86	82	88	83	86	.	.	.	.	.
UNC-A	.	.	.	.	.	.	.	.	.	.
UNC-CH	464	492	492	504	494	.	1	.	.	.
UNC-C	4	3	7	2	7	13	15	16	11	18
UNC-G	7	10	11	11	12	9	1	1	1	3
UNC-P	.	.	.	.	.	.	.	.	.	.
UNC-W	.	.	.	.	.	.	.	1	1	1
WCU	.	.	.	.	29	1	1	.	14	2
WSSU	.	.	.	.	25	.	.	.	1	.
<b>UNC Total</b>	<b>665</b>	<b>695</b>	<b>705</b>	<b>713</b>	<b>777</b>	<b>45</b>	<b>78</b>	<b>124</b>	<b>134</b>	<b>154</b>

Health care-related degrees lead to a high percentage of employment. Using data from the NC Department of Commerce's TOWER (Tool for Online Workforce and Education Reporting), we can track the percentage of health care graduates who find work in any profession in North Carolina (the system does not allow for tracking of students who go to work in other states), and can also track which students with health care degrees go to work specifically in health care-related professions in North Carolina. Some graduates without health care-related degrees also go to work in health care-related fields.

### **UNC Health Care-Related Degree Holders Working in All Professions in North Carolina**

The two tables below, prepared by the NC Department of Commerce's LEAD (Labor and Economic Analysis Division), look at whether 2011-2012 UNC graduates with health care degrees were working in any profession in North Carolina.

Table 1F demonstrates that for all UNC undergraduate health care-related degree holders, 79.4% were employed in NC a year after graduating, with a total reported annualized median wage of \$44,857. There was considerable variation between schools, ranging from a low of 68.6% among UNC Asheville undergraduates working in North Carolina to a rate of 90.2% of Winston-Salem State graduates working in North Carolina.

### A NOTE ON NC TOWER

NC TOWER provides useful data about how UNC students are responding to the challenges of health care, and other sector, employment in the state, but it also has limitations. Besides its inability to determine how many graduates are working outside of North Carolina, NC TOWER does not capture individuals who are self-employed or those working for the federal government (including the military). About 90% of employment in North Carolina is captured by the NC TOWER system.

NC TOWER also provides some information about wages. For this report, we asked for total wages for 2011-2012 UNC graduates beginning one year following graduation and continuing for four quarters. This obviously understates the annual wage rate, because if someone started working in the fourth quarter of 2013, or was between jobs at any point during those four quarters, total annual income would be low.

That said, the data enable us to make some observations about how UNC is meeting the state's health care needs.

**Table 1F: Employment and Wages in All NC Professions Among 2011-2012 Undergraduate UNC Health-Related Degree Recipients**

Health Professions and Related Clinical Sciences (CIPS 51) Degree Recipients 2011-2012 Employment and Wages in North Carolina | (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Health Professions and Related</b>	<b>3,261</b>	<b>2,590</b>	<b>79.4%</b>	<b>\$42,559</b>	<b>\$44,857</b>
ASU	Health Professions and Related	211	165	78.2%	\$30,159	\$31,605
ECU	Health Professions and Related	757	579	76.5%	\$38,429	\$41,008

FSU	Health Professions and Related	42	34	81.0%	\$62,791	\$63,865
NC A&T	Health Professions and Related	44	37	84.1%	\$44,877	\$45,758
NCCU	Health Professions and Related	76	55	72.4%	\$44,484	\$48,200
UNCA	Health Professions and Related	51	35	68.6%	\$18,292	\$19,693
UNC-CH	Health Professions and Related	380	282	74.2%	\$46,670	\$50,223
UNCC	Health Professions and Related	313	259	82.7%	\$45,428	\$47,960
UNCG	Health Professions and Related	296	248	83.8%	\$35,981	\$38,765
UNCP	Health Professions and Related	47	33	70.2%	\$48,098	\$50,310
UNCW	Health Professions and Related	222	174	78.4%	\$39,994	\$44,114
WCU	Health Professions and Related	252	175	69.4%	\$40,721	\$43,983
WSSU	Health Professions and Related	570	514	90.2%	\$51,747	\$51,330

Table 1G looks at graduate student employment. Those working anywhere in NC with health-care related graduate degrees from UNC received a premium for their degree, making an overall median of \$62,103 annually compared to the undergraduate median of \$44,857.

They also showed less employment in North Carolina in all professions tracked, with an average of 64.2% of UNC graduate students with degrees working in covered North Carolina jobs. Again, not showing up as employed in this sector in North Carolina could mean someone was self-employed, unemployed, employed by the federal government or employed in another state. Among the group showing up as employed here, there was considerable variation. At Appalachian State and NC State, just over 50% of graduate degree holders in health care were employed in North Carolina a year later, whereas at North Carolina Central and Winston-Salem State more than 80% of graduate degree holders were, and at UNC Wilmington 94.4% of graduate health care degree holders were employed in North Carolina.

**Table 1G: Employment and Wages in All NC Professions Among 2011-2012 Graduate UNC Health-Related Degree Recipients**

Health Professions and Related Clinical Sciences (CIPS 51) Degree Recipients 2011-2012  
 Employment and Wages in North Carolina | (2013Q3, 2013Q4, 2014Q1, 2014Q2)  
 Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Health Professions and Related</b>	<b>2,141</b>	<b>1,374</b>	<b>64.2%</b>	<b>\$72,516</b>	<b>\$62,103</b>
ASU	Health Professions and Related	62	32	51.6%	\$40,204	\$41,446
ECU	Health Professions and Related	460	312	67.8%	\$62,097	\$58,462
NCCU	Health Professions and Related	38	32	84.2%	\$38,439	\$41,763
NC State	Health Professions and Related	89	46	51.7%	\$42,664	\$41,759
UNC-CH	Health Professions and Related	951	527	55.4%	\$82,512	\$68,872
UNCC	Health Professions and Related	134	105	78.4%	\$76,611	\$67,548
UNCG	Health Professions and Related	158	123	77.8%	\$91,203	\$85,976
UNCW	Health Professions and Related	18	17	94.4%	\$74,267	\$75,132
WCU	Health Professions and Related	102	73	71.6%	\$65,578	\$62,573
WSSU	Health Professions and Related	129	107	82.9%	\$65,304	\$67,307

**UNC Health Care Degree Holders Working Specifically in Health Care Professions in North Carolina**

Another way of looking at market responsiveness is to examine what percentage of health care-related degree holders go to work specifically in health care and social assistance employers in North Carolina.

As shown in Table 1H, among UNC 2011-2012 recipients of health care-related degrees, 1,869, or 57.3%, were working in North Carolina health care-related occupations the following year,

earning an annualized median wage of \$45,914. There was a particularly strong connection between people from Winston-Salem State with such undergraduate degrees and jobs: 76.5% of graduates were working for North Carolina health care-related employers. Among the small cohort of UNC Asheville students with undergraduate health care degrees, 33.3% were working for North Carolina health care-related concerns. The totals in this table bear some additional explanation. In addition to not counting those who are self-employed or who work for the federal government, the data do not capture graduates working in “health care” functions in non-health care sectors: for example school nurses would be counted as employees in the “education” sector.

**Table 1H: NC Employment and Wages Among UNC Undergraduate Health Care-Related Degree Holders Working in Health Care-Related Sector**

Health Professions and Related Clinical Sciences (CIPS 51) Degree Recipients 2011-2012 Employment and Wages in North Carolina in NAICS (62) Health Care and Social Assistance (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Health Professions and Related</b>	<b>3,261</b>	<b>1,869</b>	<b>57.3%</b>	<b>\$42,911</b>	<b>\$45,914</b>
ASU	Health Professions and Related	211	78	37.0%	\$35,927	\$39,117
ECU	Health Professions and Related	757	406	53.6%	\$38,999	\$43,510
FSU	Health Professions and Related	42	24	57.1%	\$58,884	\$64,557
NC A&T	Health Professions and Related	44	27	61.4%	\$43,726	\$46,489
NCCU	Health Professions and Related	76	29	38.2%	\$45,069	\$53,375
UNCA	Health Professions and Related	51	17	33.3%	\$19,441	\$20,126
UNC-CH	Health Professions and Related	380	196	51.6%	\$43,217	\$48,702
UNCC	Health Professions and Related	313	218	69.6%	\$44,574	\$48,324

UNCG	Health Professions and Related	296	165	55.7%	\$37,529	\$42,459
UNCP	Health Professions and Related	47	29	61.7%	\$47,816	\$51,020
UNCW	Health Professions and Related	222	123	55.4%	\$40,162	\$44,187
WCU	Health Professions and Related	252	121	48.0%	\$40,081	\$44,713
WSSU	Health Professions and Related	570	436	76.5%	\$49,949	\$50,798

Table 1I looks at health care-related graduate degree holders working at health care and social assistance businesses in North Carolina. A total of 881 2011-2012 UNC students with graduate degrees in health care went to work in such jobs, earning an annualized median wage of \$59,910. If you were a graduate student with a health care degree, there was a 41.1% chance you would go to work in a North Carolina health care-related organization. The likelihood of that outcome was higher at UNC Wilmington and Winston-Salem State (both 66.7%) and lower at UNC-Chapel Hill (33.4%).

**Table 1I: NC Employment and Wages among UNC Graduate Health Care-Related Degree Holders Working in Health Care–Related Sector**

Health Professions and Related Clinical Sciences (CIPS 51) Degree Recipients 2011-2012 Employment and Wages in North Carolina in NAICS (62) Health Care and Social Assistance | (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Health Professions and Related</b>	<b>2,141</b>	<b>881</b>	<b>41.1%</b>	<b>\$68,379</b>	<b>\$59,910</b>
ASU	Health Professions and Related	62	23	37.1%	\$39,641	\$41,781
ECU	Health Professions and Related	460	213	46.3%	\$55,760	\$56,814
NCCU	Health Professions and Related	38	24	63.2%	\$40,014	\$41,763

NC State	Health Professions and Related	89	*	*	*	*
UNC-CH	Health Professions and Related	951	318	33.4%	\$76,350	\$60,136
UNCC	Health Professions and Related	134	78	58.2%	\$79,525	\$69,705
UNCG	Health Professions and Related	158	69	43.7%	\$83,790	\$85,554
UNCW	Health Professions and Related	18	12	66.7%	\$71,333	\$75,065
WCU	Health Professions and Related	102	58	56.9%	\$69,290	\$65,261
WSSU	Health Professions and Related	129	86	66.7%	\$62,254	\$65,353

**Education**

As in health care, there is a predictable demand for students with education degrees. The [US Department of Labor](#) projects 20% growth in jobs in education services, with 675,000 new jobs being created nationally between 2012 and 2022.

UNC has always played a critical role in meeting the demands of NC employers in this field. For example, UNC supplies about a third of all initially licensed K-12 classroom teachers annually for NC public schools.

Our ongoing ability to meet the needs of employers in this sector going forward has already been extensively examined in other reports by UNC General Administration.

In this section, we will review some of the trends over time in degree production, teacher licensure and employment to look at overall demand and earnings for graduates employed in a range of positions, not just teaching, in this sector.

**Teacher Productivity**

Fifteen of UNC’s 16 four-year degree-granting campuses have a school, college or department of education, and they generate thousands of graduates and newly licensed teachers and principals each year.

As has been documented in the Board of Governors' recent special [report](#), the number of prospective teachers emerging from our campuses to replace existing teachers and teach the increasing numbers of school students in the state has been steadily declining since 2010.

Looking at Table 1J, the decline is clearly coming among undergraduates. The number of undergraduates receiving initial licensure has declined from 4538 in the 2009-2010 school year to 4070 in the 2013-2014 school year – a 10.3% decline, with a 5.2% decline in just the last year. During that time period, students with graduate degrees in education have increased slightly. The Board of Governors report offers a series of initiatives to address the decline in teaching candidates, and state efforts to increase starting pay for teachers could have a positive effect.

**Table 1J: New Initially Licensed Teachers by UNC Campus (Traditional Undergraduate, MAT/Initial Licensure, Alternative Licensure)**

	Actual	Actual	Actual	Actual	Actual	5 YR
Campus	2009-10	2010-11	2011-12	2012-13	2013-14	Total
ASU	609	552	590	524	529	2,804
ECU	799	743	719	726	717	3,704
ECSU	74	79	58	57	54	322
FSU	170	129	105	114	126	644
NCA&T	94	107	118	110	101	530
NCCU	130	116	83	88	105	522
NCSU	313	394	419	462	398	1,986
UNCA	80	83	41	49	33	286
UNC-CH	169	172	478	472	135	1,426
UNCC	627	676	406	435	760	2,904
UNCG	519	427	475	373	309	2,103
UNCP	176	196	198	182	195	947
UNCW	390	378	375	360	331	1,834
WCU	335	322	334	282	239	1,512
WSSU	53	62	62	57	38	272
Totals	4,538	4,436	4,461	4,291	4,070	21,796

When it comes to education, the correlation between a UNC degree and employment in North Carolina remains high: about three-quarters of those receiving an education degree work in North Carolina in “education services.”

Since most education degree holders work in PK-12 public school education, wages vary little between institutions, but the percentages employed in North Carolina in “educational services” range from just under 50% of NC A&T graduates to about 83% of UNC Pembroke graduates.

## UNDERSTANDING THE EDUCATION SECTOR

Just because someone is working in the “education services” sector, it doesn’t mean they are teaching: they could be an administrator, a school nurse, or a custodian. Similarly, someone with an education degree might be employed in an educational function, but working for a company that is classified in another field – for example, they could conduct continuing education for a manufacturer.

When it comes to percentages employed, the LEAD data from NC TOWER only reveals the percentage employed in the state in jobs in a particular category. As noted in the health care section earlier, it does not include anyone who is self-employed, who works for the federal government, or who works in another state.

**Table 1K. Employment and Wages of UNC Undergraduate Education Degree Recipients Working in Education Sector in NC**

UNC Undergraduate Program | Education (CIPS 13) Degree Recipients 2011-2012  
Employment and Wages in North Carolina in NAICS (61) Educational Services (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Education (CIPS 13)</b>	<b>3,392</b>	<b>2,515</b>	<b>74.1%</b>	<b>\$30,838</b>	<b>\$33,380</b>
ASU	Education (CIPS 13)	587	450	76.7%	\$29,250	\$32,927
ECU	Education (CIPS 13)	514	406	79.0%	\$32,955	\$33,372
ECSU	Education (CIPS 13)	60	33	55.0%	\$24,113	\$30,800
FSU	Education (CIPS 13)	82	51	62.2%	\$28,195	\$33,298
NC A&T	Education (CIPS 13)	63	31	49.2%	\$32,131	\$35,150
NCCU	Education (CIPS 13)	42	30	71.4%	\$33,357	\$35,000
NC State	Education (CIPS 13)	307	196	63.8%	\$31,800	\$35,163

UNC-CH	Education (CIPS 13)	81	53	65.4%	\$30,431	\$34,494
UNCC	Education (CIPS 13)	539	421	78.1%	\$31,386	\$34,211
UNCG	Education (CIPS 13)	398	320	80.4%	\$30,631	\$33,389
UNCP	Education (CIPS 13)	128	106	82.8%	\$30,938	\$32,782
UNCW	Education (CIPS 13)	267	183	68.5%	\$30,625	\$33,481
WCU	Education (CIPS 13)	254	196	77.2%	\$29,931	\$32,253
WSSU	Education (CIPS 13)	70	39	55.7%	\$30,072	\$33,888

Table 1L shows a total of 2,311 UNC students with a graduate degree in education were working in the education sector one year after graduation, a higher percentage than among undergraduate students. Those with graduate degrees earn about \$9,000 more, on average, than undergraduate degree holders.

**Table 1L. Employment & Wages of UNC Graduate Education Degree Recipients Working in Education Sector in NC**

UNC Graduate Program | Education (CIPS 13) Degree Recipients 2011-2012 Employment and Wages in North Carolina in NAICS (61) Educational Services (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Education (CIPS 13)</b>	<b>3,004</b>	<b>2,311</b>	<b>76.9%</b>	<b>\$43,942</b>	<b>\$42,379</b>
ASU	Education (CIPS 13)	398	324	81.4%	\$44,891	\$44,039
ECU	Education (CIPS 13)	465	387	83.2%	\$44,328	\$43,644
ECSU	Education (CIPS 13)	19	18	94.7%	\$52,186	\$51,792
FSU	Education (CIPS 13)	49	40	81.6%	\$40,040	\$41,489
NC A&T	Education (CIPS 13)	198	134	67.7%	\$39,917	\$41,098
NCCU	Education (CIPS 13)	78	64	82.1%	\$48,433	\$47,280
NC State	Education (CIPS 13)	467	352	75.4%	\$44,624	\$42,115
UNC-CH	Education (CIPS 13)	228	170	74.6%	\$43,581	\$43,452

UNCC	Education (CIPS 13)	341	250	73.3%	\$40,117	\$39,906
UNCG	Education (CIPS 13)	294	224	76.2%	\$49,552	\$44,138
UNCP	Education (CIPS 13)	158	113	71.5%	\$42,723	\$42,365
UNCW	Education (CIPS 13)	92	69	75.0%	\$42,025	\$38,876
WCU	Education (CIPS 13)	197	149	75.6%	\$41,486	\$39,956
WSSU	Education (CIPS 13)	20	17	85.0%	\$41,570	\$41,099

It's not just education degree holders who work in educational institutions. Tables 1M and 1N indicate that just over 10% of all 2011-2012 UNC undergraduate degree recipients (Table 1M), and 18% of 2011-2012 UNC graduate degree recipients (Table 1N), worked in elementary and secondary schools. In many cases these degree recipients may have graduated with a non-“education” degree, but could have received full licensure to teach. In other cases, they may be working in a non-teaching function in schools, as, for example, a school nurse.

**Table 1M: 2011-2012 UNC Undergraduate Degree Recipients Employment and Wages in North Carolina Elementary and Secondary Schools**

UNC Undergraduate Program | Degree Recipients 2011-2012 Employment and Wages in North Carolina in NAICS (611110) Elementary and Secondary Schools (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>All</b>	<b>34,891</b>	<b>3,617</b>	<b>10.4%</b>	<b>\$27,470</b>	<b>\$32,761</b>
ASU	All	3,386	513	15.2%	\$27,498	\$32,748
ECU	All	4,393	521	11.9%	\$30,256	\$32,973
ECSU	All	405	57	14.1%	\$22,534	\$30,377
FSU	All	973	116	11.9%	\$21,986	\$26,718
NC A&T	All	1,270	99	7.8%	\$21,785	\$22,435
NCCU	All	917	108	11.8%	\$22,455	\$22,981
NC State	All	5,139	262	5.1%	\$28,326	\$34,574

UNCA	All	705	58	8.2%	\$23,748	\$30,929
UNC-CH	All	4,385	179	4.1%	\$24,962	\$33,336
UNCC	All	4,025	553	13.7%	\$28,806	\$33,064
UNCG	All	2,901	412	14.2%	\$28,159	\$32,896
UNCP	All	885	189	21.4%	\$26,852	\$32,398
UNCW	All	2,688	239	8.9%	\$28,613	\$33,314
WCU	All	1,552	218	14.0%	\$28,290	\$31,965
WSSU	All	1,267	93	7.3%	\$23,587	\$28,500

**Table 1N: 2011-2012 UNC Graduate Degree Recipients Employment and Wages in North Carolina Elementary and Secondary Schools**

UNC Graduate Program | Degree Recipients 2011-2012 Employment and Wages in North Carolina in NAICS (611110) Elementary and Secondary Schools (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All Public Universities</b>	<b>All</b>	<b>13,254</b>	<b>2,403</b>	<b>18.1%</b>	<b>\$42,285</b>	<b>\$41,436</b>
ASU	All	842	323	38.4%	\$43,619	\$43,371
ECU	All	1,768	463	26.2%	\$43,531	\$43,091
ECSU	All	23	18	78.3%	\$52,186	\$51,792
FSU	All	160	46	28.8%	\$37,465	\$40,769
NC A&T	All	385	120	31.2%	\$41,497	\$41,196
NCCU	All	589	99	16.8%	\$44,073	\$45,363
NC State	All	2,736	325	11.9%	\$41,272	\$40,296
UNCA	All	10	*	*	*	*
UNC-CH	All	3,059	177	5.8%	\$41,082	\$42,527
UNCC	All	1,197	225	18.8%	\$38,456	\$38,982
UNCG	All	1,047	247	23.6%	\$45,886	\$41,681
UNCP	All	214	111	51.9%	\$41,250	\$40,962

UNCW	All	466	69	14.8%	\$41,173	\$38,106
WCU	All	586	159	27.1%	\$40,615	\$39,590
WSSU	All	172	21	12.2%	\$38,747	\$40,458

Note: Some information was suppressed to protect confidentiality. The UNC School of the Arts was excluded from both of these tables.

A final way to look at the impact of education degrees for UNC graduates is to look at the percentage of graduates who are working anywhere in North Carolina following graduation. Table 1O and 1P show that for both undergraduate and graduate education degree holders from UNC, about 85% are working somewhere in the state, indicating less “leakage” than in the healthcare sector (see tables 1F and 1G).

Table 1O and 1P summarize results by campus for undergraduate and graduate degree holders in education. Overall, 86.1% of undergraduate education degree holders and 84.3% of graduate degree holders are working in North Carolina jobs.

**Table 1O: Employment and Wages 2011-2012 UNC Undergraduate Education Degree Holders Working in Any Job in NC**

UNC Undergraduate Program | Education (CIPS 13) Degree Recipients 2011-2012  
 Employment and Wages in North Carolina (2013Q3, 2013Q4, 2014Q1, 2014Q2)  
 Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Education (CIPS 13)</b>	<b>3,392</b>	<b>2,919</b>	<b>86.1%</b>	<b>\$30,914</b>	<b>\$33,448</b>
ASU	Education (CIPS 13)	587	509	86.7%	\$29,797	\$32,980
ECU	Education (CIPS 13)	514	444	86.4%	\$33,138	\$33,450
ECSU	Education (CIPS 13)	60	49	81.7%	\$23,026	\$30,095
FSU	Education (CIPS 13)	82	66	80.5%	\$28,621	\$31,566
NC A&T	Education (CIPS 13)	63	47	74.6%	\$27,902	\$34,183
NCCU	Education (CIPS 13)	42	35	83.3%	\$31,977	\$34,444
NC State	Education (CIPS 13)	307	257	83.7%	\$33,730	\$35,204

UNC-CH	Education (CIPS 13)	81	61	75.3%	\$30,477	\$34,469
UNCC	Education (CIPS 13)	539	469	87.0%	\$31,190	\$34,417
UNCG	Education (CIPS 13)	398	364	91.5%	\$30,692	\$33,534
UNCP	Education (CIPS 13)	128	115	89.8%	\$31,124	\$32,829
UNCW	Education (CIPS 13)	267	213	79.8%	\$29,830	\$33,431
WCU	Education (CIPS 13)	254	228	89.8%	\$30,178	\$32,479
WSSU	Education (CIPS 13)	70	62	88.6%	\$28,518	\$33,526

**Table 1P: 2011-2012 UNC Graduate Education Degree Holders Working in Any Job in NC**

UNC Graduate Program | Education (CIPS 13) Degree Recipients 2011-2012

Employment and Wages in North Carolina (2013Q3, 2013Q4, 2014Q1, 2014Q2)

Source: Labor and Economic Analysis Division and NC Common Follow-Up System

University	Subject Area	Graduates	(2013Q3, 2013Q4, 2014Q1, 2014Q2)			
			Employed	Percent Employed	Mean Annual Wage	Median Annual Wage
<b>All UNC INSTITUTIONS</b>	<b>Education (CIPS 13)</b>	<b>3,004</b>	<b>2,533</b>	<b>84.3%</b>	<b>\$44,233</b>	<b>\$42,655</b>
ASU	Education (CIPS 13)	398	351	88.2%	\$45,316	\$44,537
ECU	Education (CIPS 13)	465	401	86.2%	\$45,264	\$44,343
ECSU	Education (CIPS 13)	19	18	94.7%	\$52,578	\$52,166
FSU	Education (CIPS 13)	49	43	87.8%	\$38,677	\$41,110
NC A&T	Education (CIPS 13)	198	170	85.9%	\$38,440	\$39,153
NCCU	Education (CIPS 13)	78	72	92.3%	\$47,025	\$46,819
NC State	Education (CIPS 13)	467	384	82.2%	\$46,291	\$43,309
UNC-CH	Education (CIPS 13)	228	185	81.1%	\$45,311	\$43,990
UNCC	Education (CIPS 13)	341	280	82.1%	\$40,700	\$39,906
UNCG	Education (CIPS 13)	294	241	82.0%	\$48,998	\$43,948
UNCP	Education (CIPS 13)	158	135	85.4%	\$41,312	\$41,808
UNCW	Education (CIPS 13)	92	72	78.3%	\$43,313	\$39,886
WCU	Education (CIPS 13)	197	163	82.7%	\$40,985	\$40,183
WSSU	Education (CIPS 13)	20	18	90.0%	\$39,783	\$42,158

Note: Some information was suppressed to protect confidentiality due to small numbers.

When it comes to education, UNC has a very sophisticated understanding of supply and demand, particularly with regard to North Carolina public school needs. The combination of the UNC data and new workforce data available from NC TOWER provide a powerful tool to shape North Carolina's responsiveness to the needs of our key employers. While workforce "demand" is more volatile and evolving in many professions than in education, there may be value in exploring more cross-walking of university and industry data in other professions going forward.

### **Recommendations going forward**

1. Create more accurate and comprehensive systems to track curricular and co-curricular experiential student learning opportunities and outcomes.
2. Secure funding to enable creation of a centralized internship portal to ensure that more students have experience working in external settings prior to graduation.
3. Encourage campuses to boost the number of activities, courses, enrollments, degrees and certificates available to students in entrepreneurship to better prepare students for the changing workforce.
4. Work with state leaders to replicate UNC's teacher supply-demand data in other key sectors deemed critical to the state's future.

## Chapter 2: The Impact of UNC Research on the Economy and the Community

Research is another important way by which UNC engages with North Carolina's economy and its communities. Students conducting research get ready for their lives post-graduation, learning disciplined thinking, analytic skills and how to work as part of a team. Faculty insights and discoveries help solve some of the biggest problems our companies, communities and countries face. Translation of those discoveries into new products, processes and policies make our government more efficient and effective, our companies more profitable, and our communities better places to live and work and play.

In this chapter we look at how UNC research is addressing North Carolina's community and economic development challenges (for a more comprehensive look at UNC research in 2013-2014, please refer to the FY 2014 Report to the President from the UNC Office of Research and Graduate Education).

### A. Research Impact on Big Sectors of the Economy

Since 2003-2004, UNC institutions have annually received over \$1 billion in sponsored awards. Those awards allow faculty to conduct research in many areas of social and economic importance. For example, in the most recent fiscal year (2013-2014), the UNC Office of Research and Graduate Education estimates that UNC institutions conducted research totaling over \$620 million in health and life sciences, \$115 million in engineering, \$95 million in education, and \$87 million in agriculture (Table 2A).

**Table 2A: Fiscal Year 2014 Sponsored Awards by Subject Area**

CIP Area	TOTAL
Agriculture	\$87,322,451
Natural resources	\$22,428,571
Architecture	\$1,568,762
Area/ethnic/culture studies	\$1,612,361
Communication	\$961,971
Computer/information sciences	\$30,422,897
Education	\$95,267,913
Engineering	\$114,949,571
Foreign lang/lit	\$1,275,370
Family/consumer science	\$2,065,058
Legal professions	\$2,486,981
English	\$110,155

Biological sciences	\$305,280,926
Math/statistics	\$20,452,227
Parks and recreation	\$586,515
Philosophy/religious studies	\$575,545
Physical sciences	\$64,106,247
Psychology	\$5,351,027
Homeland security	\$323,188
Public administration	\$13,855,931
Social sciences	\$65,484,111
Transportation	\$13,548,479
Visual/performing arts	\$1,531,474
Health professions	\$319,611,592
Business/Management	\$4,223,608
All Other - Instructional	\$86,228,853
All Other - Public Service/Non-Instructional	\$67,130,374
Unspecified discipline or program	\$25,205,380

\*Classifications are reported in campus electronic research administration tools and based on a condensed version of the National Center for Educational Statistics' Classification of Instructional Programs (CIP). For full CIP subject name, see <http://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55>. Inter-institutional awards are included in figures shown. CIP classifications are not reported for NCSSM and UNCSCA awards.

As businesses have cut back on corporate research and development nationally, the federal government has increasingly stepped in to support much of the basic research that historically has been performed by the private sector. But businesses have also turned directly to universities to answer some of the critical questions they are seeking to answer. UNC institutions were awarded more than \$97 million in industry-sponsored projects in 2013-2014. According to the UNC Research and Graduate Education Office, UNC-Chapel Hill and NC State each performed more than \$40 million in such research last year.

There is room for considerable growth in this area as campuses and businesses work more closely together.

The recent report by Economic Modeling Specialists International (EMSI), [“Demonstrating the Collective Economic Value of the University of North Carolina System,”](#) breaks out the economic impact of research in terms of the number of jobs it creates. It’s a big number. Besides adding more than \$1.5 billion in value over and above the state’s investment in research, campus-conducted research at UNC adds the equivalent of more than 22,000 jobs.

And each year, a wide range of intellectual property is created by UNC campuses. Over the past four years, according to the EMSI report, UNC institutions have made 1,695 inventions, filed 855 patent applications and executed 625 licenses with entities to commercialize discoveries, generating about \$34 million in licensing income (Table 2B).

**Table 2B: Intellectual Property on UNC Campuses, 2009-2013**

Year	Invention Disclosures Received	US Patent Applications Filed	Licenses and Options Executed
2009-2010	316	166	136
2010-2011	410	225	147
2011-2012	532	232	149
2012-2013	449	232	197
<b>Total</b>	1,707	855	629

Note: These figures supplied by the UNC Office of Research and Graduate Education differ slightly from those in the EMSI report.

## B. Targeted Research Investment

UNC's "Our Time, Our Future" depicts a different way that research helps inform the state's economic future: by working on some of our state's biggest economic development priorities.

In a [series of listening sessions](#) conducted in November and December of 2012 in eight different regions of the state, North Carolina business and economic leaders identified the economic sectors they believed to be most important for the future of the state.

These priorities were integrated into "Our Time, Our Future" in January 2013 as areas of research focus. The plan urges UNC to look for opportunities to address areas of clear economic importance to the state's economies using expertise that exists on multiple campuses to perform "game-changing research":

- Advanced manufacturing: developing new techniques and technology to enable us to make products more efficiently
- Coastal and marine science: finding new ways to protect, enjoy and benefit from North Carolina's varied resources
- Data science: learning how to process, understand and interpret the volume of data available in nearly every sector to make us smarter and more productive

- Defense, military and security: inventing new technology to benefit the military in areas ranging from biomedical devices to engineering to data to language studies.
- Energy: discovering new ways to handle the creations, distribution and disposal of the fuel we use for transportation, operation of factories and the heating and cooling of our homes.
- Pharmacoengineering: understanding how to blend technology and medicine to create new drugs, drug delivery systems and treatment strategies.

These areas were validated when the [North Carolina Jobs Plan](#) of the North Carolina Economic Development Board was published in December 2013. In that report the Board recommended manufacturing, IT, defense, energy and biopharmaceuticals as “targeted growth clusters” for “jobs attraction and retention based on wage rate and projected growth analytics.”

In 2014, the General Assembly provided the first state funding to support UNC research using this targeted approach, providing \$3 million for what has been named the UNC [ROI \(Research Opportunities Initiative\)](#) program. Work is underway now on a series of projects in the fields of advanced manufacturing, coastal and marine science, data science, defense, energy and pharmacoengineering.

The belief is that focused attention in these areas where there is overlap between multi-institutional UNC expertise, strong interest on the part of industry, and a state commitment, new breakthroughs can be made, intellectual property can be generated, economic value can be gained, and, eventually, new jobs will be created.

An ongoing area of interest for UNC has been finding ways to increase the number of research discoveries that are converted to commercial value. In 2009, UNC worked with IBM and multiple partner companies to assess processes for technology commercialization. The resulting report, “[Innovate, Collaborate, Accelerate](#),” led to a number of recommendations and changes on campus that have encouraged more commercialization efforts, workshops for faculty on commercialization and some funding to support the cost of moving ideas from theory to proven product.

UNCP received \$100,000 from the Coins for Alzheimer's Research Trust (Rotarians in North Carolina, plus four other southern states, are the sponsors of The **CART** Fund) to study Positive Cathepsin B Modulation for an Effective Treatment to Slow Alzheimer's Disease. Alzheimer's disease (AD) is the most frequent form of dementia and key pathogenic factors include the A $\beta$ 42 peptide and tau species which accumulate as a result of over-production and/or inefficient clearance. Strategies to enhance protein clearance are prime candidates for drug discovery efforts.

Six campuses, East Carolina, NCA&T State, NC State, UNC-Chapel Hill, UNC Charlotte and UNC Greensboro, currently report annually on their efforts to commercialize technology to the Association of University Technology Managers, or [AUTM](#), and some campuses have created their own funds designed to move forward ideas. At NC State, for example, the [Chancellor's Innovation Fund](#), created in 2010, provides up to \$75,000 to support short-term commercially-focused projects “for the development and advancement of ideas and discoveries” developed at the university. In January 2015, UNC Chapel Hill created the [Carolina Research Venture Fund](#), a \$5 million fund to help startups commercialize technology developed at the university. As Joan Siefert Rose, president of the Council for Entrepreneurial Development [noted](#): “Universities appreciate the fact that they have a great asset in their intellectual property and in the very smart people that are part of their community.”

In January 2015, Governor McCrory's Innovation to Jobs Task Force released a [set of recommendations](#), including proposing a fund to provide university researchers an opportunity to prove the concept of a new discovery can be turned into a product and an early stage investment fund to help fledgling university spinouts get off the ground, some of which are included in the Governor's 2015 budget proposal.

## B. Research Impact on Communities

Much of the over \$1 billion in annual sponsored awards to UNC institutions is directed at answering questions in, with, and for various community partners. In order to better quantify community-engaged activity through sponsored programs, the UNC Research and Graduate Education office worked with campuses in 2013-2014 to initiate a new set of questions that faculty and staff now answer about their sponsored projects. Data now reflect whether or not a sponsored project activity or budget can be classified as “community engagement” and at what percentage. For example, a faculty member can now report that 50% of her project activity meets the definition of community engagement and that 25% of the project budget is applied towards community engagement. Community engagement is defined, as it is by the Carnegie Foundation, as “collaboration between institutions of higher education and their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.” The questions also ask where the community engaged activity is taking place and where the community engaged budget is applied: in North Carolina, out of state, or international.

The questions were rolled out to campuses in September 2013, which does not allow for a complete picture of the fiscal year's award activity for the purposes of this report. In fact, only 42% of all awards received in 2013-2014 included responses to these community engagement questions. In addition, the community engagement data collected were only for the 14 UNC institutions and UNC General Administration that use RAMSeS (Research Administration Management System and eSubmissions). North Carolina State University, which conducts a substantive amount of community engaged research, is not included in this initial snapshot. While the data collected in 2013-2014 for those 15 institutions are likely a gross underestimate, they showed that upwards of \$50 million in 2013-2014 sponsored awards met the community engagement definition, and nearly \$44 million of that engaged work took place in, with and for North Carolina communities (Table 2C).

**Table 2C: Fiscal Year 2014 (Partial) Sponsored Awards by Campus Including Community Engagement (CE) Activity and Budget**

Campus	Awards reporting CE activity	% FY14 awards reporting CE activity	Awards reporting 100% activity as CE	Awards reporting all CE activity taking place in NC	Awards reporting CE budget	% FY14 awards reporting CE budget	Awards reporting 100% budget as CE	Awards reporting all CE budget as applied in NC	Total CE budget	Total CE budget in NC
ASU	61	36%	37	47	45	26%	30	42	\$2,406,454	\$2,374,398
ECSU	11	20%	3	9	11	20%	4	9	\$426,852	\$385,197
ECU	121	28%	91	102	96	22%	62	86	\$8,729,369	\$8,616,445
FSU	14	27%	10	12	10	19%	10	9	\$314,820	\$314,570
NCAT	36	17%	21	30	32	15%	17	29	\$10,498,061	\$10,424,361
NCCU	12	13%	8	9	10	11%	5	8	\$761,666	\$710,466
UNCA	8	32%	3	7	2	8%	0	0	\$29,442	\$ -
UNCCH	287	6%	174	172	225	4%	129	145	\$22,102,736	\$16,067,896
UNCC	91	23%	58	66	63	16%	44	53	\$1,289,527	\$1,233,987
UNCG	53	21%	34	42	37	14%	25	34	\$1,408,229	\$1,380,071
UNCP	3	6%	1	3	3	6%	1	3	\$6,499	\$6,499
UNCW	58	29%	41	49	40	20%	32	33	\$793,384	\$721,092
WCU	16	24%	13	12	15	23%	11	11	\$1,031,234	\$1,004,752
WSSU	11	22%	8	11	10	20%	8	10	\$608,262	\$608,262
UNCGA	0	0%	0	0	0	0%	0	0	\$ -	\$ -
<b>TOTAL</b>	<b>782</b>	<b>20%</b>	<b>502</b>	<b>571</b>	<b>599</b>	<b>15%</b>	<b>378</b>	<b>472</b>	<b>\$50,406,536</b>	<b>\$43,847,998</b>

Note: Due to the timing of the rollout of community engagement questions in RAMSES, a full fiscal year is not represented.

A second way of looking at UNC’s connection to North Carolina’s community and economic needs through research is to consider sources from where campuses receive their sponsored awards. For example, nongovernmental organizations provide an important function in our state, delivering programs, developing policy and assisting community and economic development needs in a variety of ways. Five such sponsor types may be particularly indicative of UNC institutions’ community engaged activity in North Carolina: state and local governments; nonprofits, foundations, and other associations.

We include aggregate data in this report to provide a snapshot of the amount of research funding that originates from these sources. The argument is that if an organization is sponsoring research, that research is assisting the organization in addressing an important need. These data indicate that in 2013-2014, UNC institutions were likely directly involved in meeting needs of NC communities through nearly \$140 million in sponsored project partnerships (Table 2D).

**Table 2D: Fiscal Year 2014 Sponsored Awards by Sponsor Type Indicative of Community Engagement**

State Government	State of North Carolina	\$95,919,942
	All other states	\$1,038,883
	Total Awards from State Government	\$96,958,824
Local Government	NC Local Government	\$5,604,320
	All other local government	\$252,646
	Total Awards from Local Government	\$5,856,965
Foundations	NC Foundations	\$16,758,017
	All other foundations	\$47,808,304
	Total Awards from Foundations	\$64,566,321
Associations	NC Associations	\$1,972,757
	All other associations	\$16,416,651
	Total Awards from Associations	\$18,389,409
Not-for-Profit Organizations	NC Not-for-profit organizations	\$18,461,528
	All other not-for-profit organizations	\$25,223,949
	Total Awards from Not-for-Profit Organizations	\$43,685,477
	Grand Total	\$229,456,995
	Grand Total in NC	\$138,716,563

## **Recommendations going forward**

1. Continue and/or increase the amount of support of research on important sectors of the North Carolina economy through expansion of the ROI program
2. Encourage campuses to pursue industry-sponsored and community-based research by UNC campuses
3. Support the translation of research for community benefit

## Chapter 3: Public Service Work in the Economy and the Community – Building the ‘Communiversality’

The third part of UNC’s mission is public service. Beyond the teaching and learning students and faculty do with our states economic and community agencies, and beyond the research done in response to the state’s needs, UNC campuses are at work daily in the community on projects that may have academic or research components, but which may also ‘simply’ benefit the people of North Carolina. The shared responsibility on the part of the community and the university is helping create a new dynamic of mutual benefit, the “communiversality.” In this section, we look at three different sorts of activities in this category: local campus-community partnerships; activities carried out statewide by UNC-based agencies; and delivery of non-academic courses both face-to-face and in person, to assist citizens in acquiring important skills and improving their quality of life.

### A. University-Community Partnerships

In order to better understand the variety of ways in which campuses are working collaboratively with community partners of all sorts, we asked each campus to list between 15-25 “community-university” projects that had been active during the 2013-2014 academic year, projects that served both the community and university, meeting important community goals. We asked them to identify the university’s role, the nature and location of the activity, the sorts of community groups they were working with, the location and the impact of the activity.

The projects identified by campuses were impressively wide-ranging, and included efforts such as setting priorities for economic development or develop new marketing strategies for communities; using the arts, sports, mentoring or new pedagogy to improve K-12 academic

### TRACKING COMMUNITY PARTNERSHIPS

In 2012, Emily Janke, director of the Institute for Community and Economic Engagement, along with UNCG’s Kristin Medlin and consultant Dr. Barbara Holland, developed The [Community Engagement Collaboratory®](#), a searchable database designed to promote awareness of the university’s community partnerships in the region and promote new ones.

The Collaboratory® has attracted widespread attention, and is being taken national through a licensing agreement with Treetop Commons so that other universities can benefit from it.

“Understanding the portrait of an institution’s engagement with communities, notes Dr. Holland, “Is essential to move from accidental, coincidental or random service activities of individuals to intentional and coordinated agendas of institutions with their communities.”

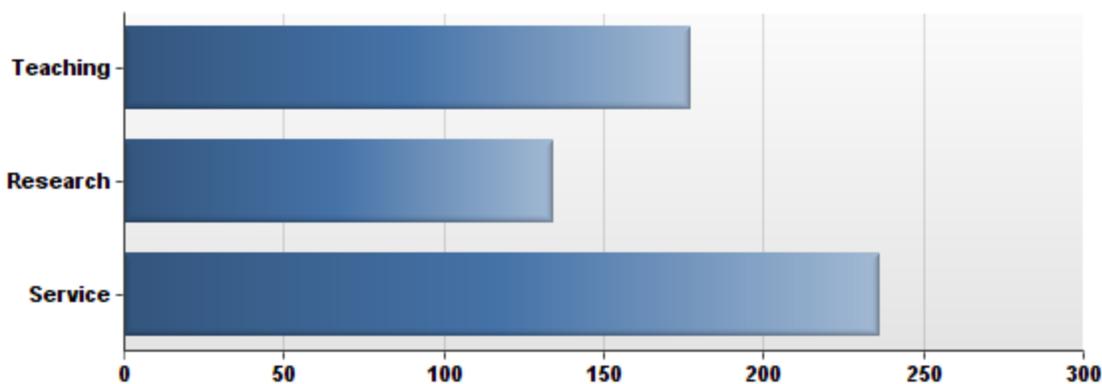
or health outcomes; finding new ways of delivering services to veterans, the poor or the elderly; developing new farming techniques or food distributions strategies; building houses; starting - up businesses; boosting the arts, improving safety; teaching coding and others.

While campuses were asked to include only a selection of the community-university partnerships they were involved in, it is interesting to note that the projects named included specific activity in 98 of North Carolina’s 100 counties and that 22 of the projects covered all 100 counties of the state. Cumberland, Guilford, Durham, Mecklenburg and Robeson counties had the most community-university projects, each with more than 30 such efforts.

In all, campuses reported more than 25,000 community members, nearly 55,000 students, and 1,900 faculty or staff were involved in these projects.

While these projects were classified as “community-university” projects, Table 3A demonstrates the extent to which these collaborations frequently involve all three elements of UNC’s three-part mission: 80% of the projects involved “service,” 60% “teaching” and 46% “research.”

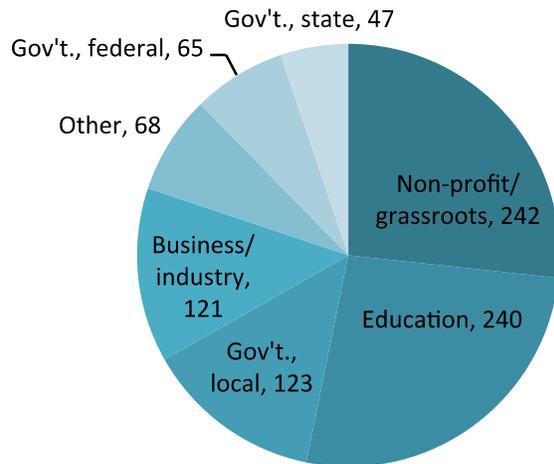
**Table 3A: UNC Institutions Role in Project (Research, and/or Service, and/or Teaching)**



Note: Includes duplicates as projects could involve 1-3 roles for our institutions

Table 3B represents the number and type of community partner organizations that campus groups collaborated with on projects. Most frequently mentioned were nonprofit or education partners, followed by local government and business and industry partners.

## Community Partner Sectors



Since we asked campuses only to list their “most active” community partnerships, the mix of activity does not provide exact data on all community-university partnerships, but it is useful to identify the relative amount of activity they are engaged in by sector area.

One example from East Carolina provides some insight as to how these partnerships can involve all elements of the university and multiple community partners in a mutually beneficial relationship. Since 2009, ECU has been working with the NC Department of Commerce’s Division of Community Assistance and distressed communities to provide technical assistance, capacity building and community development consultation. The Talent Enhancement and Capacity Building Program leverages Community Development Block Grant funding with ECU’s faculty and student expertise in public administration, political science, tourism, business and other fields to help 35 towns and counties develop and support new ideas to revamp their economies. The “curriculum” covers topics that include project Planning and Feasibility, preparing grant proposals, preparing budgets, evaluating programs, improving management and others. Eric Evans, Assistant Edgecombe County Manager, said what he learned “helped me take my skills as a grant writer and administrator to a new level... I have also used what I learned to train others in our organization.” The learning goes both ways. According to Sharon Paynter, ECU Assistant Professor of Political Science, “I have learned more about the many kinds of development going on in eastern North Carolina. Having the opportunity to put

theoretical concepts from the classroom into practice through the grants written by TECB participants is one of the highlights for me.”

“Having the opportunity to put theoretical concepts from the classroom into practice...is one of the highlights for me.”

Dr. Sharon Paynter, ECU faculty member, on the TECB

## B. State-serving Entities

The University has a long history of working directly with the people of the state through organizations with a specific outreach mission. The most prominent examples of these organizations are the [Cooperative Extension Service](#), the [Industrial Extension Service](#), and the [Small Business and Technology Development Center](#), which help advise businesses and community organizations on how to work more effectively, as well as the [School of Government](#), which helps teach government leaders to work more effectively and efficiently, and the [North Carolina Area Health Education Centers](#), which meet various healthcare needs. Smaller university-based centers throughout the state have addressed regional needs.

These organizations play a critical role in extending the University into every county in the state. In this report, we look at these five state-serving organizations performing different functions in assisting elected officials, farmers, nonprofit leaders, health care professionals and business owners, large and small, in becoming more successful.

### **Cooperative Extension Service, or CES (based at NC State and NCA&T State)**

The North Carolina Cooperative Extension Service (CES), established in 1914, delivers research-based agricultural, food and youth development programs through 101 local centers, based in every county in North Carolina and the Eastern Band of Cherokees’ Qualla Boundary.

In local centers across the state, county agents are the bridge between the public and Extension specialists working at the state’s land-grant universities. Agents educate the public through local meetings and workshops, field days and personal consultations, as well as online trainings, social media outreach and innovative web resources.

The NC State and NCA&T State extension services are part of the national Cooperative Extension System, providing seamless educational programs in agriculture, food and youth development that enrich the lives, land and economy of North Carolinians. Extension also benefits from a vast volunteer network, led by the State Advisory Council (SAC), with more than 40,000 volunteers each year.

Ultimately, the Extension Service creates economic, societal and intellectual prosperity for North Carolinians through a series of interactions with North Carolinians. Cooperative Extension connects at a larger scale than probably any other entity in North Carolina. During FY 2013-2014, extension:

- Made 6,155,856 client contacts, nearly 2 million face to face, and more than 4 million through other means
- Delivered non-degree programs to 576,928 participants through 16,221 programs.
- Served other participants: 19,366 people received re-certifications in 40 different fields of interest and 9,253 citizens received new certifications (certification information is for calendar year 2014; all other figures are for FY 2013-2014).

For more information about Cooperative Extension, see this [report](#).

### **Industrial Extension Service, or IES (based at NC State)**

The Industrial Extension Service (IES) of NC State University provides education and technical assistance to businesses and industries across the state. IES works one-on-one with small- and medium-sized manufacturers to help them stay competitive and in the process save jobs and increase profits. The IES staff help those companies with improvements, the use of modern practices, and new technology. The NC State [Industrial Extension Service \(IES\)](#) also administers the National Institute of Standards and Technology's [Hollings Manufacturing Economic Partnership \(MEP\)](#) center for North Carolina. The NCMEP center provides manufacturing extension services that enhance productivity, innovative capacity, and technological performance, and strengthen the global competitiveness of small- and medium-sized U.S.-based manufacturing firms. NCMEP links IES and its manufacturing partners to a network of national expertise and suppliers, creating a hub of innovation and knowledge for North Carolina.

In academic year 2013-2014, IES client projects in 44 counties reported economic impact of \$247,935,990 and 2345 jobs created or retained. In that same time period, IES held 148 open enrollment courses with 1884 students enrolled. For more information on IES, consult their [annual report](#).

## **North Carolina Area Health Education Centers, or NC AHEC (based at UNC-Chapel Hill)**

The mission of the North Carolina Area Health Education Centers Program (NC AHEC) is to meet the state's health and health workforce needs. NC AHEC provides educational programs and services that bridge academic institutions and communities to improve the health of the people of North Carolina, with a focus on underserved populations. NC AHEC's vision is to lead the transformation of health care education and services in North Carolina. Program values include a commitment to collaboration, diversity, service excellence, innovation, and integrity.

### **HEALTH CARE FOR UNDERSERVED AREAS**

The [Mountain Area Health Education Center's](#) Family Medicine Residency Program is overcoming a big national and NC challenge - attracting young primary care physicians to live and work in distressed, rural areas. Ten North Carolina counties are considered to be what the federal Health Resources and Services Administration identifies as "[health professional shortage areas](#)". Seven of those counties – Clay, Gates, Graham, Northampton, Tyrrell, Warren and Washington – are rural counties. Currently, four three-year residencies are administered by the NC AHEC program in community health centers serving rural and underserved areas. In Hendersonville, the program partners with Blue Ridge Community Health Services, with the four yearly residents also putting in hours at rural practices in neighboring communities. This past year, 190 U.S. and 1,000 foreign students applied for the four available slots. They all expressed an interest in working in underserved NC communities and becoming "the full-scope family-medicine doc."

During FY 2013-2014, NC AHEC served 282,963 individuals across the state. These services included the following:

- 186,935 health professionals attended 8,840 continuing medical education and continuing education programs for a total of 22,441 instructional hours
- 1,189 providers received on-site support services for practice improvement in 82 counties
- 5,590 health professions students were placed in NC AHEC rotations in 79 counties
- 1,858 health professions students were housed while providing service in 92 counties
- 3,359 health careers pipeline students (K-12) from 79 counties participated in educational opportunities
- 82,869 interactions by health professionals in all 100 counties using NC AHEC information and library science services

In addition, a total of 1,163 health care residents were trained in NC AHEC residencies in all 100 counties (includes all active, in-state, nonfederal, non-resident-in-training physicians licensed in NC indicating completion of an AHEC residency).

For more information on NC AHEC, see this [summary report](#).

### **School of Government (based at UNC-Chapel Hill)**

UNC – Chapel Hill’s School of Government (SOG) engages in practical scholarship that helps public officials and citizens understand and improve state and local government. For more than 80 years, the School has worked to be nonpartisan, policy-neutral, and responsive resource for North Carolina’s state and local public officials.

As the largest university-based local government training, advisory, and research organization in the United States, the School of Government offered 186 courses, webinars, and specialized conferences for 16,007 North Carolina public officials in fiscal year 2013-14.

In 2013-14, the School of Government published 135 books, manuals, reports, articles, bulletins, and other print and online content related to state and local government. The School sold and distributed 78,174 copies of these publications in fiscal year 2013-14. Additionally, each day that the General Assembly is in session, the School produces *Daily Bulletin Online*, which reports on the day’s activities for members of the legislature and others who need to follow the course of legislation.

School of Government faculty members respond to phone calls and e-mail messages on routine and urgent matters and also engage in long-term advising projects for local governing boards,

## **NEW FINANCE STRATEGIES FOR SMALL TOWNS**

The School of Government’s Development Finance Initiative (DFI), helps local governments find innovative ways to finance the revitalization of North Carolina cities and towns.

Created in 2011, DFI has leveraged an initial investment by Local Government Federal Credit Union to fund its work. In addition to offering a graduate course in community revitalization, DFI has collaborated with local governments, developers, and nonprofit organizations on 64 projects in 50 North Carolina communities, ranging in scope from the commercial restoration of individual historic properties to the redevelopment of entire municipal districts in North Carolina. During the 2013-14 fiscal year, DFI had 25 active collaborations with local governments and their partners.

DFI has also worked with six NC Community Development Corporations (CDC’s), which play a key role in providing economic development and assisting in housing development in low-income communities, helping the CDC’s identify new sources of earned income and improve relations with local government entities.

legislative committees, and statewide commissions. In 2013, the School asked faculty members to begin tracking the number of email and phone inquiries they received. While this system is not yet perfected, in FY 2013-2014, faculty reported that they responded to 15,291 phone and email inquiries.

The School's nationally-ranked Master of Public Administration (MPA) program had a total enrollment of 53 residential students in the 2013 academic year. MPA@UNC, the online format, is designed for working professionals and others who aspire to become public service leaders but require the flexibility of an online format. Launched in January 2013, MPA@UNC enrolled 81 students in fiscal year 2013-14. Graduates of the Carolina MPA program pursue leadership careers in local, state, and federal government and in nonprofit and private organizations that serve the public interest.

**Small Business and Technology Development Center, or SBTDC (a program of UNC General Administration, housed at NC State)**

The SBTDC is the University's largest inter-institutional program and functions as a business and technology extension service. It provides business advisory services, management education and training, publications, and other tools and resources that enable existing small and mid-sized businesses, emerging entrepreneurs, economic development organizations, and local and state leaders to innovate and succeed. The SBTDC was authorized as an inter-institutional program of The University of North Carolina system by the Board of Governors in 1984. It is funded in part by the US Small Business Administration, with required matching state funding support.

Administered on behalf of the UNC system by NC State University, its 16 offices across the state are hosted by constituent institutions of UNC. This structure allows the SBTDC to have extensive connections with faculty, staff and students at each campus, which enhances its service capabilities and supports its outreach to clients in all 100 counties of the state.

The SBTDC's performance and fiscal management is routinely monitored by federal program managers and The University. It is required to undergo a rigorous external accreditation process every 4-5 years and has been continuously accredited without conditions. Its economic impact results are also assessed annually through required independent third party studies. Some key results of these include:

- The SBTDC provides a strong return on investment. Counseling provided to clients consistently generates \$3.67 in new tax revenue for every \$1.00 invested in the SBTDC program.
- SBTDC client businesses consistently outperform average North Carolina businesses in sales growth (SBTDC client 14% vs. average NC business 1.8%) and employment growth (SBTDC client 16.5% vs. average NC business 5%).

Each year, hundreds of students work through SBTDC obtaining and sharing hands-on skills and expertise as part of internships, practicums and student competitions.

**Table 3C: SBTDC Key Outcomes for FY 2013-2014**

Metric	Results
# students working with client businesses	400
# student hours	25,144
# SBTDC business clients	6,856
# counties served	100
# SBTDC staff counseling hours	68,009
# business starts	101
# jobs created	956
# jobs retained	700
\$ capital formation	\$57,305,899

For more information about the SBTDC, see [the annual report](#).

## C. Noncredit Education at UNC

As important a service as delivering credit-bearing courses is to UNC, the greatest growth in the University is in noncredit programs, courses which provide the people of this state the opportunity to gain new knowledge that will enrich their lives. They may take courses to get up to date on changes in their current work, or may get a project management certificate that enables them to move up in their company. They may need new subject matter knowledge or technical skills to launch a new career. They may want to learn a new language, or gain horticulture skills, or develop new artistic skills to enrich their lives or help them be more effective in their volunteer work. They may be able to take these classes during the day, or may need to take them at night or on weekends. In some cases these courses are delivered face-to-face; in others, they are taken online.

For this report, we take a first look at where campuses are in noncredit education offerings, an increasingly important part of any institution's community and economic engagement.

### **Face-to-face and hybrid noncredit education**

The majority of people taking noncredit courses at UNC take them close to home, enrolling in classes that are delivered near where they live. Table 3D shows the extent to which our campuses are involved in this activity, either in courses that are fully delivered in person ("face-to-face") or in part in person and in part online ("hybrid").

In all, during FY 2013-2014, UNC campuses delivered over 6,000 courses, with more than 450,000 enrollments in those classes. While we do not know the total number of students (some noncredit students may have enrolled in more than one course), it is worth noting that there were just over 220,000 students enrolled at UNC in credit-bearing courses.

### **PREVENTING CHILD ABUSE**

One of the more popular and critical – both internally and externally – continuing education and professional development programs at ECU is offered via their TEDI BEAR Children's Advocacy Center. The free [Stewards of Children](#) training is available to all interested adults who want to know how to prevent, recognize, and respond to child sexual abuse.

This training requires 2 to 2.5 hours, and is generally offered twice each month offsite at a location in the community. There is no charge.

The training is appropriate for parents and other adults who want to know how to protect children from child sexual abuse. However, the training is also approved for continuing education credit for nurses, therapists, substance abuse professionals, child care workers, law enforcement staff, and others.

Interestingly, about 132,000 of the noncredit enrollments, or 29%, led to granting of some sort of credential or recognition, either in the form of Continuing Education Unit (CEU) or Continuing Medical Education (CMU), or some sort of certificate. This recognition provides important information to an employer, potential employer, or someone seeking to determine if someone has skills or abilities in a particular area.

Among UNC system campuses, NC State, with 1,164 courses and 270,561 enrollments, and UNC-Chapel Hill, with 3,327 courses and 138,241 enrollments, are by far the biggest players. But all campuses with the exception of the UNC School of the Arts, deliver some sort of noncredit education courses in their community. The NC School of Science and Mathematics, for example, delivers a series of in-service training courses for math and science teachers from across the state.

**Table 3D: Non- Credit Education at UNC 2013-2014 (face-to-face, or hybrid)**

<b>Campus</b>	<b>Courses*</b>	<b>Enrollments</b>	<b>CEUs/certificates</b>
ASU	118	5,873	438
ECSU	138	3	N/A
ECU	363	7,327	2,798
FSU	157	4,293	15
NCATSU	64	472	461
NCCU	42	N/A	26
NCSSM	4	1,540	216
NCSU	1,164	270,561	111,008
UNCA	52	8,113	66
UNCC	406	5,207	3,513
UNCCH	3,327	138,241	8,443
UNCG	100	6,772	**
UNCP	5	310	302
UNCSA	18	571	22
UNCW	31	3,960	3,864
WCU	46	3,521	652
WSSU	10	187	177
Total	6,045	456,951	132,001

*\*We did not include courses where there was not a traditional face-to-face meeting in a classroom or an online equivalent, those courses offered by AHEC, CES, IES, SOG or SBTDC (see Section B of this chapter), or all of those offered en masse during events at museums, planetariums, libraries, or those offered through offices of human resources*

*\*\*Note: UNCG provides professional development/continuing education opportunities in which CEUs or CMEs are granted. However, UNCG is not the entity that awards CEUs/CMEs to participants - these are awarded by the community organization and not tracked by UNCG.*

### **Noncredit online education**

Noncredit online offerings represent an important part of UNC's future service to the citizens, communities and companies of the state. These courses enable people anywhere in the state to refresh their skills and knowledge. Table 3E provides some initial data about these courses, which will evolve over time.

In 2013-2104, fifteen of our campuses offered these courses. Most active by far is NC State, with 289,379 enrollments in online courses, about 62% of the total, with people taking these courses generating more than 13,000 CEUs. UNC-CH had 166,633 enrollments in such courses.

**Table 3E: 100% Online Non- Credit Education at UNC 2013-2014**

<b>Campus</b>	<b>Courses</b>	<b>Enrollments</b>	<b>CEUs/ certificates</b>
ASU	3	37	20
ECU	68	8,985	5,083
FSU	10	44	35
NCATSU	8	63	8
NCCU	418	22	0
NCSU	33	289,379	13,169
UNCA	0	0	0
UNCC	136	337	322
UNC-CH	140	166,633	N/A
UNCG	21	175	*
UNCP	19	72	72
UNCSA	0	0	0
UNCW	1	112	0
WCU	26	807	155
WSSU	3	25	0
Total	886	466,691	18,864

*\*See note on Table 3D; UNCG does not grant certificate credit*

When coupled with the figures from Cooperative Extension and other state-serving entities, the figures on face-to-face, hybrid and noncredit distance education provide important demonstration of the reach and impact of the UNC system. For now, we can say with some confidence that more North Carolina citizens are taking noncredit classes at UNC than are taking classes for credit. This under-recognized part of the UNC system will only grow larger in the future – fueled especially by the continued rapid growth in MOOCs (Massive Open Online Courses).

**Recommendations going forward:**

1. Encourage campuses to standardize collection methods on university-community partnerships to ensure awareness of these partnerships on campus, among community partners and between campuses, and for other strategic purposes.
2. Invite state-serving entities to present to an appropriate Board of Governors committee regularly to ensure continued awareness of the critical role these entities play in community and economic engagement.
3. Explore developing a fuller report on noncredit education at UNC, or significantly expand detail on this part of the function in a future UNC Engagement report, including examination of revenue models, to increase visibility of this increasingly-important function.
4. Continue to support a UNC Engagement Council to be stewards of not only collecting data, but also of leveraging resources and communicating findings so we can do more and better of this work.

## Appendix A: Sources

The following sources represent useful information about strategies universities are using to capture, count and increase community and economic engagement, and were helpful to us in assembling this report.

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## Appendix B: 'Universities in Action'

The following selected campus narratives - one example from each UNC institution – further illustrate how they work in community and economic engagement in a manner consistent with their mission and unique circumstances. For a complete listing, please go to our website, [northcarolina.edu](http://northcarolina.edu).

### ASU: Class design project leads to cash award , patent application and potential business

A design for a therapeutic glove that could help improve dexterity and grip strength for children and adults has resulted in a \$15,000 award to an interdisciplinary team of Appalachian State University students.

Junior industrial design major Bailey Williams from Advance, designed and created a prototype for gloves with magnets in the finger tips as part of a design class in the Department of Technology and Environmental Design in the College of Fine and Applied Arts. Students in the class were challenged to design a product for a specific disability. Williams' assignment was for 2- to 5-year olds with limited fine motor abilities.

While she initially wasn't excited about the task, as Williams researched the challenges affecting the assigned demographic, she became more excited about its potential.

"First I had to do the research on what children's fine motor skills were," Williams said about the first step in her design process. "I found that children with dyspraxia can have impaired gross and fine-motor abilities. I felt passionate about those children who may have trouble getting dressed in the morning, feeding themselves or playing outside," she said.

She designed a toothbrush and a spoon that might be easy to hold, which led to gloves that could help strengthen the hand.

Her design, called MagnaGrips, uses small magnets placed in the glove's finger tips to mimic the pinching motion needed to grip or hold items.

Williams, an apparel minor, used her sewing skills to create samples of her design. The more people she shared the mock ups with, the more she learned of other potential users, such as stroke victims working to improve their grip and hand strength.

"The beauty of this product is that every time we show it to someone else they come up with 10 more ways it can be used," said Williams, who consulted with an occupational therapist at Watauga Medical Center. "I was amazed that something so simple could be so helpful," she said.

That's what good design is about, said Kern Maass, an associate professor and coordinator of Appalachian's industrial design program. "I tell students that if you design for the fringes, you solve for the masses," he said of design methodology. "And that's certainly true of Bailey's project."

After students in her industrial design class were invited to compete for a chance to enter the Texas

Christian University's Values and Ventures Business Plan Competition, Williams enlisted the help of senior Mary Oshana from Chicago, a family and consumer science and secondary education major, and senior finance and banking major Jason Capps of Asheville to develop and present a business plan.

Their plan was selected out of more than two dozen proposals from others in her industrial design class to take to Texas. Williams and her team were mentored for the competition by Erich Schlenker, managing director of the Transportation Insight Center for Entrepreneurship located in Appalachian's Walker College of Business, as well as professors in the business college.

Their presentation won second place at the competition and a \$15,000 award. Williams plans to use her portion of the winnings to take her product to market.

Since winning the competition, Williams has been busy exploring manufacturing and market outlets for her product. "If Erich hadn't told us about the TCU competition, this would be just another idea in my sketchbook," Williams said. "This has all been Cinderella like," she said of the activity that has followed the April 11 competition.

Her therapeutic glove design has been protected by a provisional patent application filing thanks to assistance from Schlenker, mentor Art Thompson and patent attorneys with Womble Carlyle in Greensboro. Williams has also talked with Carolina Glove and Safety Company in Conover about manufacturing her product.

Schlenker said competitions, such as the one held at TCU, help students apply classroom knowledge to real-world applications. "When you take a concept out of the classroom, and in this case take it to a rehabilitation center at a hospital, a special-needs instructor at a high school and a mentor who has experience bringing product to market, it makes what they are learning in class real," he said.

Williams is planning a Kickstarter campaign to help raise additional funds online to take her product to market, which would also keep her as sole owner of the company she has named Magna Pro Solutions.

"I definitely want to carry it forward and create a business out of it," she said of the class project. "So many people came up to us at the business plan competition and told us how a family member could use this product in so many different ways. We really want get the gloves out to address those needs as soon as we can."

## ECSU: SBTDC

The Northeastern Regional Center of the North Carolina Small Business & Technology Development Center (SBTDC) was established in 1985 at ECSU. The SBTDC is a statewide university system program that advises small and mid-size businesses. The ECSU – SBTDC's goal is to help entrepreneurs make their business better. The Northeast Center has been serving business clients and providing economic development assistance as a Community Outreach Service of ECSU for 29 years. The ECSU office is responsible for 12 counties in the Northeast: Dare, Currituck, Camden, Pasquotank, Perquimans, Gates, Chowan, Bertie, Hertford, Hyde, Tyrrell and Washington.

The Center at ECSU has a staff of four persons that include a regional Center Director, two Business Counselors, and an Assistant Business Counselor. The office regularly hires ECSU student interns from the ECSU School of Business to work in the office providing assistance to the business counselors. Their assistance to business clients across the region has included market & product research, compiling financial projections, and conducting industry analysis for potential new business start ups.

In 2013 the SBTDC at Elizabeth City State University was provided new leadership and is in a strong rebuilding time of the Center's 29 year life. Michael Twiddy was appointed to the position of Regional Center Director in May. Our Regional Center is moving forward to get fully staffed to

the state model that includes a Center Director, two Business Counselors, and an Assistant Business Counselor.

Our Reported Economic Impact in 2013 - 2014:

Below is information on the 2013 ECSU – SBTDC Center’s actual performance as presented back to our funding partners:

- Total Client Cases Served: we provided counseling services to 166 new clients in 2013; and 86 client cases thus far in 2014.
- Total Counseling hours: Staff has provided 1,894 business counseling hours to clients in 2013; and we have provided 1,386 business counseling hours thus far in 2014.
- Trainings:
  - Event Attendance: we have had a total of 245 attendees in 4 training events in 2013.
  - Thus far in 2014, we have had a total of 201 attendees at our 9 training events.
- Capital Formation: we achieved \$680,000 in client capital formation in 2013. We have achieved \$692,000 in client capital formation thus far in 2014.
- Jobs Created / Retained: we recorded and verified 12 new jobs in 2013. We have recorded and verified five new jobs thus far in 2014.
- Business Start-Ups: we achieved 2 new start-up businesses in 2013. We have recorded 2 new business start ups thus far in 2014.

### **ECSU Student Success Story**

One of our success stories in 2013 was a recent graduate from the School of Business at ECSU, and is a young entrepreneur minority small business owner that went through our Youth Entrepreneurship Training Series in the fall of 2012. Our staff was very excited about this new business start-up and we look forward to continuing our counseling assistance to this client to help coach his business to a successful future.

Economic Development Activities (A short list of Rural Development Engagement)

- Regional Center Director Twiddy met with the Wanchese Seafood Industrial Park Director Bob Peele two times during the quarter to discuss economic development activities at the three parks he manages. We get regular client referrals from the three Marine Parks in our region.
- In April, ECSU’s SBTDC Biz Boost Counselor & Center Director conducted a circuit riding trip to Hyde County that included a meeting with Hyde County Economic Development Director Chris Noble and the new Hyde County manager Bill Rich. Our engagement here is to seek further client referral activity.

- Our Regional Center regularly engages with the Northeast Partnership and the Northeastern Department of Commerce's Existing Industry representative. During the past quarter we have attended two Northeastern Economic Developers (NEED) meetings hosted by the partnership, and also attended a regional Chambers of the Northeast (CONE) meeting hosted by the partnership. The Northeastern Regional Center maintains a satellite work office in the Northeast Partnership facilities.
- We continue a strategic partnering relationship with the River City CDC in Elizabeth City, where we get client referrals and conduct client meetings through their facilities. Center Director Twiddy serves on their CDC Board and participates as a board member in their regular meetings. River City CDC has under construction a new business park facility that will include the McMorrine Street Small Business Incubator. This business incubator will be made possible through special funding they have received from the US Small Business Administration. We have had clients looking at this site as a potential business location site.
- Our new business counselor met with LaChaun Banks, an Economic Development Coordinator, and Elizabeth Basnight, an Economic Development Analyst from the Keenan Institute on June 13. They work with women and minorities and are looking for ways in which we could collaborate together in the counties in which our territories overlap. We share three counties with them, which are Bertie, Gates, and Hertford. We will partner together when it is appropriate for us to do so in the aforementioned counties.
- Business counselor has communicated with Vonner Horton through e-mail, who is a community leader in Bertie County. She runs a non-profit called A Pathway to Success, in which she assists young ladies to find ways in which to succeed. SBTDC Business Counselor attended a luncheon and met Ms. Horton in person. Future activities will include helping some of her clients who need information on starting businesses. Assistant Business Counselor and PVO's will be utilized for good resource management.

### **Special Collaboration Project**

The SBTDC at ECSU in the fourth quarter of 2013 began a two-year project where we are partnering with the Women's Business Center at Old Dominion University, the SBA, and local government officials across four Northeastern Counties in providing a series of eight business training events. These trainings are being funded through special funds from the Hurricane Sandy relief program and are specifically directed towards Dare, Hyde, Tyrrell and Currituck Counties. We conducted the first training in December 2013. We conducted the second training on April 30, 2014. The third training event will be held in the July – August time period. We are responsible for eight trainings under this project with ODU.

## ECU: Medicine to their spirit—Adopt-a-Grandparent program matches students with senior adults

Katie Simpson has received more than an education at East Carolina University. She has new grandparents. Simpson spends at least an hour a week at Golden Living Center in Greenville through the “Adopt-a-Grandparent” program with the goal to match students and local senior citizens for supportive, meaningful, one-on-one relationships. Simpson learned about the program at the ECU Volunteer and Service-Learning Center.

“From one-time activities to ongoing service experiences in the community to service-learning courses, there are so many opportunities through the VSLC to extend your education beyond the classroom and campus,” said Dennis McCunney, director of ECU’s Volunteer and Service-Learning Center. “These experiential learning opportunities can really help students figure out where they can best use their skills and talents. At the same time, students learn from local community members through that direct contact.”

In her Cornelius high school, Simpson volunteered with children with special needs, which inspired her ultimate career choice: occupational therapy. When she came to ECU, she wanted to try working with a different group. “I may want to do something in gerontology now because of my experience with ‘Adopt-a-Grandparent,’” Simpson said. “It’s been awesome.”

Golden Living Center offers short-term and long-term rehabilitation and end-of-life hospice care. Residents often are recovering from hip fractures or hip replacement, heart attacks, falls, motor vehicle accidents, or any type of acute medical condition that requires hospitalization for three days or more. ECU’s Department of Family Medicine provides primary medical care for the center’s 152 residents, and health sciences students go there for clinical learning.

Terry Edwards, director of recreation and volunteer services at the center, said the visits from ECU students are like “medicine to their spirit. It’s something a pill or money can’t buy.”

On a recent weekday, ECU students from Gamma Sigma Sigma service sorority, recreational therapy, and other majors played bingo with residents. In between rounds, they sang requests like “How Much Is That Doggie in the Window?” and “You Are My Sunshine.”

Lindsay Caddell, a junior nursing major and sorority member, has been volunteering at the center since she was a freshman. “I love all the residents and love doing bingo,” said Caddell, an EC Scholar from West End. “Coming here is a great stress reliever.”

Students lead a variety of activities from scrapbooking to art projects to painting nails, playing music, and more. “It’s genuine and goes beyond fulfilling a task. It’s a commitment. It’s something that blossoms between that resident and volunteer,” Edwards said. The interaction helps rejuvenate interests that may have been set aside because of ailment or age.

“We have to show them a reason to keep going. It’s that feeling of wanting to be loved and respected,” Edwards said. Simpson experienced what it’s like to lose someone close for the first time this summer when her adopted grandparent Arlene Searcey died. “I knew it was coming,” Simpson said. “At the end of my first year, she would say things like ‘I’m ready to go home.’ This year, I noticed she was doing it more.”

Searcey liked to sing in church services, and it was one of the last happy things Simpson shared before Searcey’s health failed quickly. Simpson said it was a scary experience and one that she would never forget. “The time I spent with her, in her last moments, I would never give that away,” she said. “She opened her eyes for the first time in three days. She didn’t have a lot of facial expression, but I could tell she was smiling with her eyes. I was holding her hand when she passed away.”

In those final days, Simpson learned even more about Searcey from her family, whom she came to know through the years. “They filled in all her memories,” Simpson said. “She was a very rambunctious woman. If you’ve ever seen *Driving Miss Daisy*, that was her.”

At the family’s request, Simpson started visiting regularly with Searcey’s sister, Blanche Tillias, who also lives at Golden Living Center.

As Simpson prepared to graduate with a bachelor’s degree in psychology, she wanted other students thinking about volunteer service to dive in. “I thought it would be depressing,” said Simpson, who has applied to graduate school for occupational therapy. “But they want to have fun. They genuinely want to see you. If you’re not there when you’re supposed to be, they will call you out the next time they see you.”

Resident Rena Medlin, vice president of Golden Living’s resident’s council, said the student visits are wonderful. “It’s something that everybody looks forward to—always,” she said.

Students in the program are asked to attend orientation, monthly meetings, and reflection events and to commit to visiting their adopted grandparent(s) at least once a week with the goal of completing at least 32 hours by the end of the semester, said Nichelle Shuck, the VSLC’s associate director.

“We encourage all ECU students and community members to be a part of the power of creating friendship from all ages and sharing our stories with each other and the community,” Shuck said.

Related video: <https://www.youtube.com/watch?v=6DK7gdrzeCQ>

## FSU: Department of Social Work hosts Boots to Suits conference

Fayetteville State University’s (FSU) Department of Social Work and Military Professional, Personal, and Family Development Program, hosted the “Boots to Suits for HR Professionals and Hiring Managers Conference” on June 5, 2013, in the Felton J. Capel Arena on the FSU campus. The conference was held from 8:00 a.m. to 4:30 p.m.

This year’s conference was geared toward training and educating human resources professionals and hiring managers on why veterans and spouses are an asset to any company or organization and encourages them to adopt military friendly hiring practices. The conference was ideal for business executives, managers, human resource professionals, search firms, or any employer who wanted to recruit today’s competitive military talent.

The keynote speaker was Ret. Lt. Col. Lisa Rosser, founder and chief executive officer of The Value of a Veteran. Rosser has done extensive work in assisting organizations improve their veteran recruiting and retention. Her military career includes 10 years of active Army duty and 11 years of service with the Army Reserve, including two and half years of mobilization after the events of 9-11. During her active duty time, she participated in three major engagements (Gulf War, Somalia, and Bosnia). Her Army Reserve career focused on operations and performance management, recruiting, placement, training, and skills development. Rosser’s civilian career capitalized on her human resources and training military experiences into an eight year career at Accenture, a Global Fortune 500 consulting firm. In 2007, she founded The Value of a Veteran and published an employer guide to recruiting the military. The enthusiastic response to the hiring guide led to workshops for corporate, government and higher education organizations, as well as webinars on critical military topics.

At the conference, participants had the opportunity to network with other businesses as well as learn the following:

- Business reasons for hiring veterans
- Tax credit for hiring veterans
- Types of career fields available through the military
- Understanding the value of adding veterans to your organization

- Military culture
- Employment and staffing techniques for military personnel
- Marketing to attract military applicants
- How to source military talent

## NCATSU: School of Nursing, community partners open diabetes education center

The School of Nursing at North Carolina A&T State University opened the new Diabetes Education, Prevention and Management Center, Thursday, May 1, at the Greensboro Urban Ministry.

The center is a partnership between the Greensboro Urban Ministry, Moses Cone Health Nutrition and Diabetes Management Center, and the School of Nursing at North Carolina A&T.

Housed at the Greensboro Urban Ministry, the center provides community members with free access to diabetes self-management and prevention education facilitated by A&T faculty and students. Community members can participate in screenings, one-on-one and group sessions and also have access to resources that help educate and prevent the disease.

“This is an extension of our mission,” said Inez Tuck, dean of the School of Nursing. “Our goal is to educate our students and to help create a healthy community.” Joe B. Whitehead, Jr., North Carolina A&T provost and vice chancellor for academic affairs said the program is an example of the university’s strategic plan and ongoing commitment to excellence in teaching and engagement.

Randy Dale, assistant director and social worker at the Greensboro Urban Ministry and Dave Jenkins, manager of the Cone Health Nutrition and Diabetes Management Center, who participated in the program, spoke about the great opportunity to partner with the university and make a difference in the community.

According to the American Diabetes Association, as many as one in three American adults will have diabetes in 2050 and an additional 79 million Americans are at high risk for developing type 2 diabetes. Since 2010, mortality rates for diabetes mellitus have increased in both Guilford County and North Carolina.

“The center will also prepare students to work with a diverse population and will help make them aware of the resources available in the community,” said Schenita Randolph, assistant professor in the School of Nursing and interim director for Community Engagement and Clinical Translation.

Dean Tuck said the long-term goal is to provide year-round services to the community and to gain additional funding that would expand the services offered. In response to a growing community need, in 2013, Greensboro Urban Ministry agreed to provide a space for North

Carolina A&T faculty and students to provide weekly diabetes support through education and outreach.

The center is free and open to the public. Upcoming evening classes will be held on May 8, 20, 21 and 27, from 5:30-7:30 p.m. and are taught by nursing faculty. Daytime classes are also offered in the spring and fall semesters.

## NCCU: Blackstone Entrepreneurs Network

North Carolina Central University (NCCU) is a founding partner of the North Carolina Blackstone Entrepreneurs Network (BEN). The Network's mission is to help catalyze the regional development of the Triangle's entrepreneurial ecosystem and strengthen economic development in the area. In 2012, BEN created a tightly connected team of Entrepreneurs-in-Residence (EIRs), regional veteran entrepreneurs to help identify marketable innovations out of area universities and regional startups with the greatest potential to become high-growth companies. EIRs work one-on-one and as a team to mentor local entrepreneurs from the University and community to assist them in achieving significant business milestones; facilitate connections to their network of experts and funders; and provide access to the broader Blackstone Entrepreneurs Network. BEN portfolio companies enjoy access to sector experts, venture coaches, angel investors, and administrative and marketing support provided by BEN Fellows. Over the past two (2) years, NCCU has selected six (6) outstanding students from its Schools of Business- MBA/undergraduate programs and Law-(intellectual property focus) to serve as Fellows. Working alongside EIRs, NCCU BEN Fellows gain knowledge and experience in a number of areas, including identifying entrepreneurial opportunities and conducting feasibility analyses. Since the inception of BEN, current portfolio and alumni companies have raised more than \$50M from private, venture, strategic, government, and non-traditional sources of funding. BEN maintains a portfolio averaging 25 active Triangle companies at all times. These companies directly contribute to the economic development of the State through job creation and revenue.

In addition to working with University and community innovators/innovation, BEN supported the training of 25 NCCU MBA students by the Small Business Technology and Development Center (SBTDC) in a 2-day entrepreneurial strategic planning workshop on campus in Fall 2013. Furthermore, during Spring 2014, the Blackstone Entrepreneurship for STEM Talent (BEST) program at NCCU was implemented. The BEST initiative engages undergraduate STEM students in the research/development phase of the entrepreneurship cycle; stimulates students'

creativity and inventiveness; and instills in students entrepreneurial thinking and action leading to business opportunity awareness. The BEST at NCCU Project has two principal components:

- Undergraduate Research, Discovery & Innovation Saturday Academy for NCCU students who are pursuing degrees in STEM disciplines; and
- Extracurricular Entrepreneurship Training program that would result in a certificate in STEM Innovation and Entrepreneurship when student graduates with a STEM B.S. degree from NCCU.

### **Quotes**

*“I have enjoyed my experience at Blackstone because of the friendly staff, communal atmosphere and accomplished co-workers who have been able to give me insight on fields of study outside of my own. Through Blackstone, I have been privileged to meet people from all sections of the business spectrum: start-up owners to venture capitalists. Blackstone provides me with the opportunity to use my law school experience as I build my professional acumen while learning from the wealth of knowledge around me”. NCCU Student and BEN Fellow- Dayo Aladeniyi (6/2014)*

*“Blackstone has helped in three main ways: fundraising, advising, and due diligence work. They helped me get my story out and provided me with experience in fundraising settings. I had an entrepreneur-in-residence, Peyton Anderson, who was a great help in understanding the mind of investors and being able to best present the Novocor opportunity. And I had a Blackstone Fellow who conducted some key market research that we are still using, and who was instrumental in the effort for our first SBIR grant application.” President and CEO, Novocor Medical System, Tony Voiers, -BEN Press Release (10/23/2013)*

Imitation is the sincerest form of flattery and is certainly an indication of success. The Blackstone Charitable Foundation launched BEN in Denver, Colorado this Spring 2014. Blackstone’s Colorado entrepreneurship network will emulate the North Carolina initiative through encouraging collaboration among local businesses, connecting startups to serial entrepreneurs, and identifying startups in Colorado with high-growth potential.

## NCSSM: Partnering with schools across state offers proven academic outcomes

Public high schools throughout North Carolina are providing students access to world-class science, technology, engineering and mathematics (STEM) instruction, as well as to other advanced placement and honors level courses by partnering with the North Carolina School of Science and Mathematics (NCSSM) through distance education.

Though NCSSM may be best known as the nation's first public boarding school specializing in STEM, the school actually serves just as many students through its distance education efforts as it does through its residential program. NCSSM connects to more than 30 schools statewide, educating nearly 500 students through IVC classrooms and more than 200 students via online courses. In each case, course offerings provide advanced instruction that is largely unavailable in the local district.

"It takes a team effort to give North Carolina's students every advantage in science and math education. Part of our mission is to provide support to schools and students across the state by providing them access to advanced course content and offerings that help meet individual academic needs," said Todd Roberts, NCSSM Chancellor.

Most of the School's educational outreach is achieved through interactive videoconference (IVC) courses, where students from up to six separate schools receive real-time classroom instruction from an NCSSM teacher and collaborate in real-time with one another to engage in problem-based learning.

Focused on honors and advanced placement content, these courses are currently provided entirely cost-free to high schools where students would not otherwise have access to advanced STEM content, such as higher mathematics, physics, genetics and biotechnology, and forensics. The program is funded by NCSSM's state budget.

One of NCSSM's distance education partners is Perquimans County Schools, located in the northeastern part of the state - one of North Carolina's most impoverished regions. Since 1992 Victor Eure has been director of technology at Perquimans County Schools. From the start, his goal was to level the playing field for students in his district. As is the case in most rural areas,

the school system struggles to recruit and retain teachers for STEM and other AP and Honors level courses.

“It’s hard to describe how remote we are. We have zero industry here other than farming. There’s not even a hotel in the county. Two-thirds of the kids qualify for reduced lunch. It’s just very hard for us to attract teachers.”

One-quarter of the Perquimans County High School student population is taking distance education courses from NCSSM at any given time.

“We want our kids to be able to connect to the rest of the state, to allow them to be competitive. We want to close the gap between the northeast and the rest of the state. NCSSM has opened doors to us that we couldn’t have been able to offer.”

## NCSU: Seeds, sweet potatoes and sprouting knowledge

Teaching About Healthy Food Systems with Place-Based Education in Classrooms, Cafeterias, School Gardens and Local Communities

FoodCorps North Carolina: Growing Healthy Children, Future Leaders FoodCorps is a national non-profit that “strives to give all children an enduring relationship with healthy food through the hands and minds of emerging leaders.” Working in partnership with local communities and organizations, FoodCorps service members aim to change children’s attitudes and behaviors towards food through nutrition education, school garden engagement, and accessibility of healthy produce through local farm-to-cafeteria pathways.

The program’s activities are hands-on, occasionally dirty and always delicious. For instance, service members develop and use garden-based nutrition education that addresses the common core and essential



standards. In practical terms, this means that school kids get consistent access to immersive, skills-based activities centered around healthy food systems. The activities themselves vary and

FoodCorps volunteers get very creative about how they ‘sprout knowledge’ amongst their students. One volunteer, for example, guides students in garden design during their art class and uses time set aside for language instruction to boost fruit and vegetable-related vocabulary.

When it comes time to get out into the garden, students have already been enlisted to choose which crops they want to plant, read seed packets and help prepare the soil. Later on, the crops are harvested and prepared by the students themselves and taste-tested in cafeterias. Julie Oxendine, Oak Hill Elementary School cafeteria manager, sees the value of this approach first-hand. In her view, “It starts in kindergarten – FoodCorps is here and encouraging kids to try different foods. By the time they’re in third and fourth grade, they already have the habit, and they’re not afraid to try new things.”

The benefits to knowledge are astounding, but the impacts reach even further to the level of school systems and communities. Such programs open pathways for Child Nutrition Directors to purchase local food for school cafeterias, for instance. It also facilitates crucial advocacy work to advance the Farm-to-School movement across the state by supporting the Farm to School Coalition of NC.

Perhaps most importantly, FoodCorps intentionally directs its efforts toward Title I schools, defined in North Carolina as public schools with a student poverty rate of more than forty percent, as these schools serve children most adversely affected by food system inequities. Maintaining productive gardens has serious practical benefits for families and communities - it can lower grocery bills and provide fresh produce in neighborhoods where access to healthy food is rare.

Indeed, FoodCorps programs have also helped start and teach community-based cooking classes for kids and their families where kids learn to make various courses and then make and serve a community meal to their parents and teachers. Young students have started entrepreneurship projects like ‘carrot markets’ in the school pick-up line, and they are growing produce in their gardens that they then sell to restaurants and cafeterias. Parents tell stories of their children teaching recipes they learned in school to their younger siblings, asking for broccoli for dinner, and wanting to plant beans on the back patio.

These students are learning life skills of the highest order. Guilford CES Horticulture Agent Karen Neill has been part of developing the FoodCorps program since the very beginning, and has personally seen its benefits. She says, “Kids are engaged, test scores are up, kids have a much greater appreciation of where food comes from.”

Neill goes on to emphasize that the kids have learned practical *“life skills - they know how to improve and amend soils; they understand seasonality.”*



The Center for Environmental Farming Systems (CEFS) and NC 4-G co-host FoodCorps in North Carolina with various community partners. In the past three years, FoodCorps North Carolina has provided training and support to seven FoodCorps service members and one fellow in six counties throughout the state. The organization is currently working in

partnership with public schools, public agencies, and community groups in New Brunswick/Hanover, Wayne, Warren, Guilford, Moore, and Gaston Counties and will have new sites in Wilson County, Charlotte/Mecklenberg, and Cherokee in the coming year. Current lead partners include NC Cooperative Extension in Gaston, Guilford, New Brunswick, and Warren Counties; Feast Down East; Good Food Sandhills; Working Landscapes; and Dillard Academy Charter School.

In its first three years, FoodCorps North Carolina worked with over 7,000 children each year, built or revitalized nearly 100 school gardens, and connected over 170 farmers to newly work with and sell to schools. FoodCorps is impacting the daily lives and habits of children, the way teachers engage their students, the visibility of gardens in learning environments, and the engagement level of community volunteers with schools.

The fact is that one in four U.S. children struggles with hunger, while paradoxically, one in three is obese or overweight. Much of North Carolina faces statistics even more alarming than these national numbers. Schools are poised to be the front lines in our nation’s response to childhood hunger and obesity: 32 million children eat school food – the source of half their calories – 180 days of the year. What we feed our children, and what we teach them about food in school, shapes how they learn, how they grow and how long they will live.

FoodCorps NC envisions a North Carolina where children know what healthy food looks and tastes like, how it grows, and where it comes from. More importantly, the organization wants

every child in the state to have access to healthy food every day. Such children would also be knowledgeable about the agricultural roots of the state, and - immersed in a healthy food



environment at a young age - will learn better, live longer, and liberate their generation from diet-related diseases. At the same time, FoodCorps service members will become emerging leaders who will become farmers, chefs, educators and public health professionals. Armed with the skills to improve school food, these leaders will go on to improve entire food and health systems across the state.

“I knew I wanted to be of service,” says Eliza Hudson, who is in her second year with FoodCorps in Guilford County. “A lot of other programs didn’t have as much direct experience with kids. I wanted to be in classrooms, outdoor classrooms, sharing my passions with them.”

Sharing expertise and passion - in other words, *servicing* - beyond the borders of the halls of higher learning is a core part of NC State’s mission. It is commitment to that humble, but powerful mission that fuels the CEFS’ partnership of programs like FoodCorps NC.

## UNCA: The Healthier Churches Project

The Healthier Churches Project is an ongoing community participatory project involving UNC Asheville, the Asheville Buncombe Institute for Parity of Achievement (ABIPA), and predominantly African-American churches in the Asheville Area. Each semester, faculty member Ameena Batada, students in designated service-learning health and wellness courses, the ABIPA director, and representatives of partner churches work together to accomplish a specific goal related to improving the health of congregation members.

Students in the Community Health Promotion course partner with church representatives to provide technical assistance in conducting a health situation analysis, the first step in the health promotion planning cycle. Each church situation analysis can provide valuable information about the health outcomes and behaviors of congregation members and the policies and programs of the churches in order to plan health programming and to use as a benchmark to measure health improvements in the future. Students and church representatives meet, discuss available tools for collecting information, such as surveys and policy/program assessments, and collect the information. Students analyze the information and prepare a summary of the findings and a recommended project for their partner church. The churches may use this information for additional health program planning.

Students work with partner churches to review the situation analysis findings and to develop and implement health promotion activities. This year’s group plans to co-conduct a Congregation

Health Fair with ABIPA, and co-submit a grant proposal to implement a program that will provide partner churches with monetary awards for meeting health promotion and policy criteria and achieving designation as a “PRAISE Church.” PRAISE stands for Preventive Health Education Resulting in Action Inspiring Success for Everyone.

Jewana McEachin Grier, executive director of ABIPA comments that, “being able to receive support from Dr. Batada and her students to conduct community surveys and synthesize the data that we have been collecting over the years has been invaluable. Her expertise and commitment to health equity is aiding us in telling our story, and measuring our outcomes and impact.”

Over the past three years, over 60 students and 10 churches have been involved in the Healthier Churches project. The Healthier Churches Project is an example of how a university-community collaboration can combine the interests of multiple stakeholders for an overall impact that are greater than the sum of the individual outcomes. In addition to improving community members’ health and improving students’ understanding of community-based and participatory health promotion programming, this project cultivates deep and sustaining relationships between UNC Asheville and the wider community, leading to a reimagining of established institutional dynamics and a reduction in health disparities.

## UNCC: Students & Technology in Academia, Research & Service

STARS (Students & Technology in Academia, Research & Service), is a program co-founded in 2005 by Drs. Teresa Dahlberg and Tiffany Barnes, faculty in UNC Charlotte’s Department of Computer Science. Originally funded by a National Science Foundation grant, the program is designed to increase the participation of women, under-represented minorities, and persons with disabilities in computing disciplines through multi-faceted interventions. The interventions focus on the influx and progression of students from middle school through graduate school in programs that lead to computing careers. STARS is organized as a national constellation of regional stars that include research universities, minority and women's universities and colleges, K-12 educators, industry, professional organizations, and community groups. Approximately 1346 students, 88 faculty from 51 colleges and universities, and over 168 regional partners have participated in student-led community-based research and activities. The program serves 46,000 K-12 students nationally.

In 2012, to sustain the program beyond grant funding, the STARS Computing Corps became a non-profit entity dedicated to building and preparing a larger, more diverse national computing workforce for the 21st. The STARS Computing Corps is comprised of multiple programs including the STARS Leadership Corps, and STARS Haiti. The STARS Leadership Corps is a multi-year service-learning experience that fosters student-led regional engagement, and challenges students to find innovative ways of leveraging technology to solve important social and global problems. The STARS Leadership Corps works with regional K-12 schools and industry and community partners to cultivate an extended student academic community. This student community engages in mentoring, professional development, and research experiences to promote recruitment and leadership development.

Examples of current STARS Computing Corps projects include the SPARCS Saturday Academy team which develops and teaches training modules for pre-college students covering various computer science topics including web development, security, object-oriented programming, and video game design. STARS students serve as mentors for middle school age girls in order to broaden participation in STEM education (Science, Technology, Engineering, Math). The training sessions are conducted monthly on the UNC Charlotte campus. The High School Game Development at Olympic Outreach Group, another STARS program, uses game development as a means of imparting the value of STEM and higher education STEM learning in an approachable and interesting way. To achieve this goal, STARS interacts with Olympic High School students on a weekly basis help them create their own games and to answer any questions about studying STEM fields

Finally, the STARS Haiti project sent 12 students from five institutions (including UNC Charlotte's College of Computing and Informatics) to Haiti during Spring Break. Accompanied by six faculty and community mentors, the STARS students spent two weeks training schoolteachers and students to use kid-friendly laptops for computer-based education. To strengthen human resource capacity, students trained and mentored 24 local Haitian high school students, and assisted local teachers and students in creating their own curricular software for the laptops. These individuals will continue to promote learning with computers long after the STARS students have returned to the United States. STARS partnered with the local non-profit, Mothering Across Continents, to complete this project.

<http://uncc.starscomputingcorps.org/projects><http://www.starsalliance.org/>

## UNC-CH: Improving services for young children with autism and their families

Researchers at the University of North Carolina at Chapel Hill have received a State Implementation Grant of \$900,000 from the Maternal and Child Health Bureau of the U.S. Department of Health and Human Services to improve services for young children with Autism Spectrum Disorder (ASD) and their families.

This three-year project has the primary purpose of linking both university and state partners to lower the ages by which young children receive appropriate developmental screening, ASD-specific screening, diagnostic assessments, and early intervention. North Carolina was one of only four states to be awarded funding by the Bureau during this cycle, and this initiative is one of the first to involve nearly all of the major ASD programs on UNC's campus.

The grant is under the directorship of Stephen Hooper, PhD, Associate Dean and Chair of the UNC School of Medicine's Department of Allied Health Sciences (DAHS), and in collaborative leadership with Rebecca Edmondson Pretzel, PhD, Associate Director of the Carolina Institute for Developmental Disabilities (CIDD). In addition to its primary goals, this grant will allow researchers to examine strategies to increase access of families to family-centered medical homes that coordinate care with pediatric subspecialties, increase public and provider awareness of the signs and symptoms of ASD, and complete a statewide needs assessment addressing family needs and barriers to coordinated care.

To accomplish the grant's objectives, DAHS and CIDD collaborators have enlisted the expertise of key UNC programs with a major focus on ASD, including the AHEC TEACCH Program, Frank Porter Graham Child Development Institute, the Gillings School of Global Public Health, the School of Social Work, and the Cecil G. Sheps Center for Health Services Research.

"While this is certainly not the first project where various programs have collaborated on issues of ASD, it is the first project where programs have collaborated around improving the coordination of state services to children suspected of having ASD and their families," Dr. Hooper said. "We are fortunate to receive these additional resources from the Maternal and Child Health Bureau, and excited about this opportunity to enlist the expertise of our UNC partners and key state agencies, such as the Autism Society of North Carolina, the state of North Carolina Early Intervention Program, and the North Carolina Department of Public

Instruction pre-kindergarten programs, in addressing these ASD-related needs across the state.”

A key component of this program will be assessing the needs of families from across the state, particularly with respect to their experiences with early screening, diagnostic assessments, and early intervention. Increasing public awareness of the early signs and symptoms of ASD also will be an annual objective, with significant efforts being devoted to rural and underserved regions of the state and examining the pathways by which families have access to the necessary services to address their child’s medical and developmental needs.

“The state of North Carolina is fortunate to have a number of service systems in place to address the needs of young children with developmental disabilities and their families,” said Dr. Edmondson Pretzel. “We are confident that this new funding will enhance current efforts and facilitate additional improvements for young children with ASD and their families.”

## UNCG: The House We All Built

On a cold March afternoon, architect and Assistant Professor Travis Hicks walks through an empty building with interior architecture students. They’re doing what comes naturally for them – imagining the many possibilities of the space. In the coming months, the unoccupied building on the corner of Tate and Lee Streets will become incubator space for UNCG’s Center for Community-Engaged Design. On January 1, Hicks was named director.

“We’re not the first to do community-engaged design, but we are on the cutting edge,” Hicks says. “Our department has been going out in the community for 50 or 60 years now. We teach students how to apply what they learn in the classroom. As a result, our faculty and students have conducted many noteworthy projects in the community.”

Several examples come to mind, both in Greensboro and abroad. Assistant Professor Robert Charest helped create “My Sister Susan’s House,” a 4,500-square-foot home downtown for single teenage mothers and their children. As a senior, Anna Will rallied her classmates and her professor Hannah Rose Mendoza to design a school for the Kyekyewere village in Ghana, Africa.

One of the neighborhoods where faculty and students have committed most of their collaborative energy is Glenwood. Through the “Sustainable Glenwood” project, they are

working to serve one of Greensboro's oldest neighborhoods by offering affordable, innovative and sustainable preservation.

The research team is comprised of undergraduate Joy Troyer, graduate student Catherine French and Hicks, their mentor. Hicks is an expert on sustainable design. Catherine brings an emphasis on preservation. And Joy is positioned as the community liaison, involving Glenwood residents in the design process to discover their vision. The project serves as a model that could impact the future of design because it brings together all three components – preservation, sustainability and the community's voice.

"We have to recognize as designers that we don't have the best ideas, people out there do," Joy says. "Ultimately the future of design, architecture and public planning is talking to the community and asking, 'What do you think?'"

Preservation Greensboro is a key partner in "Sustainable Glenwood." Benjamin Briggs, executive director, says the organization looks to UNCG as an important partner in developing new initiatives in "green" practices. Inviting ideas from the community, even with the department's strong history, these community-engaged projects are just the beginning. Having an official incubator space for the center will allow for even greater collaboration across the community, starting with the dedication on April 4. "We want individuals and communities across the Piedmont to share their needs so that we can make a positive impact through community-engaged design," Hicks says. Soon, the center will begin accepting requests for proposals, particularly for renovations.

As Hicks points out, the greenest house is the one that is already built. "Renovating current structures can be one of the best solutions to energy consumption. I think these projects are the best model for our students because we're showing them this is a valid way of working."

Before coming to UNCG, Hicks practiced architecture and interior design for 13 years, primarily the design of massive structures up to 500,000 square feet. He came to UNCG to pursue something different. "My background may be around big buildings," he says. "But my passion is around reducing people's impact on the earth." And having greater impact on his students. "My inspiration is to teach a new generation of designers in a way that is completely different from the way that I was taught. The smaller projects that we pursue convey a message to the students that smaller is potentially better."

Empty homes, full of potential. Back in Glenwood, another community-engaged design project is taking shape in Hicks' mind. How can we take "Sustainable Glenwood" a step further? He got to thinking. What if he and his students could renovate the homes in such a way that made them extremely energy efficient? What if the homes were also redesigned so that the future owners could stay in the houses for the rest of their lives – the "Aging in Place" concept?

People do not become homeless because of the rent or the mortgage alone, Hicks notes. It's the addition of the utilities that often makes it difficult for ends to meet. Take away the high electricity bill, and you begin changing the scenario. Because it's off the grid, the home becomes affordable – for the long term.

"If we design and renovate unoccupied homes to make them net-zero energy, what was once an empty structure can become a home for a low-income family, a home that requires no electric bill, because we designed it that way." Hicks – and his Center for Community-Engaged Design – has support for ideas like these. The City of Greensboro, Community Housing Solutions and Partners Ending Homelessness are all interested in helping. "People in Greensboro really have a heart for Glenwood," Hicks says. "They have a heart for strong, historic neighborhoods that have a strong sense of community. My goal is always to work with the community and find out what the community envisions as the proper use and future for the houses."

There is another advantage in this "win-win" scenario: Students are given the opportunity to design and renovate the homes. Many other university programs don't emphasize community engagement the way UNCG does. "Here, students learn to think about their neighbors, about the users of their designs," he says. "We want to lead a movement that will change the face of design professionally in ways that inspire designers and builders to be more engaged."

Hicks values the opportunity to focus on community-engaged design. "The refreshing thing about coming here to teach is that there is a lot of academic freedom for professors to carve out their niche. The high aspiration of going out and serving others has not been clearly defined as a path for design professionals until very recently," he says. "I've found that path here."

<http://newsandfeatures.uncg.edu/community-engaged-design/>

**UNCP: University reaches out to its neighbors with a business incubator**

On December 6, 2013, UNC Pembroke's Chancellor Kyle R. Carter officially launched the Entrepreneurship Incubator, a community outreach that he says will be "transformative" for a region with chronically high unemployment.

Located in a 17,000-square-foot storefront on Main Street in Pembroke, the incubator will provide space for 8-to-12 startup businesses. The building will also house the offices of two existing business development offices - the Thomas Family Center for Entrepreneurship and UNC's Small Business and Technology Development Center.

With a planned opening in summer 2015, the incubator is expected to produce 115 jobs and create private investment of \$1.15 million within three years. In addition to serving community startups, UNCP business students will get hands-on experience working in the incubator.

Two years in the making, the funding for the project came from several sources and put on display the university's persistence and entrepreneurial spirit. In September, the university received approval of a \$932,000 grant from the U.S. Commerce Department's Economic Development Administration.

The grant, when combined with a \$200,000 grant from the Golden Leaf Foundation will cover the cost of renovating the building. Private contributors gave \$210,000 toward the purchase of the building, located at 202 Main Street.

From inside the building, Chancellor Carter addressed a gathering of area officials and business people. He called the incubator a "catalyst" for community development and an asset for the university and its business students.

"This is a proud day for UNCP," he said. "Since I arrived in Pembroke, we have looked for something that would bring us closer together with the community.

"This is not a white horse riding in to save the day," he said. "But we do have good people coming in here who will collaborate on solving problems. This is a foothold where we can build a better place together."

The project is the Carter administration's most aggressive outreach program. "I have called this a transformative project, and for many good reasons," Chancellor Carter said. There is wide agreement in the community.

In letters of support, the Town of Pembroke gave its “enthusiastic support,” said the town’s manager, Oryan Lowry. “The university and its existing Thomas Family Center for Entrepreneurship have been invaluable to the economic improvement of Pembroke and its surrounding region.”

Greg Cummings, Robeson County’s economic development director, acknowledged the need for support for startups as well as established businesses.

“Having UNCP’s knowledgeable faculty as a resource, together with the creative, enthusiastic assistance of the university’s students, will provide a strong foundation to help our business community meet the challenges of this economically challenged community,” he said. “The fact that this facility will be housed in the center of town, convenient to business owners, shows the respect the university has for the community and its commitment to supporting economic growth.”

Local entrepreneur and UNCP graduate James Freeman, whose restaurant start-up got valuable help from the SBTDC, said “the incubator is going to be awesome. Ten or 15 years down the road, Pembroke is going to be an amazing place.”

The project represents the coming together of public and private funding. In addition to the federal grant, the project received money from North Carolina’s Golden Leaf Foundation, which funds projects in rural North Carolina communities affected by the loss of tobacco revenues, and the Thomas Family Foundation, which has supported entrepreneurship programs at the university since 2006.

Wendy Lowery, UNC Pembroke’s vice chancellor for advancement, oversaw the effort to raise the private funds that are making the project possible. Contributors included Jim and Sally Thomas Foundation, Mary Ann Elliot Foundation, Lumbee Bank, Pembroke Hardware, CoreVantage Technologies, Dr. Robin Cummings, Dr. and Mrs. Kyle Carter, Ron Brown and Russell Livermore.

“The private investors in this project truly believe in the mission of UNC Pembroke and the constituents who will be served by this initiative,” Lowery said. “Their support also signifies the importance of enhancing the partnership between the university and the Town of Pembroke and is an investment in both entities. This project epitomizes the strength of collaboration.”

## UNCSA: Open Dream Ensemble Teaching Artist Partnering Project

Arts-integration engages students through sensory, kinesthetic and creative pathways, enhancing their ability to apply knowledge and critical thinking to every element of the curriculum. In 2014, Open Dream Ensemble successfully piloted the Teaching Artist Partnering Project, training classroom teachers in arts-integration techniques while giving established teaching artists collaborative leadership roles. Pairing experienced Open Dream teaching artists with classroom teachers for ten sessions, the project brought arts-enlivened learning to students in Winston-Salem from February through June. Although it was a small-scale project in terms of reach and timeframe, the overall growth described by both the classroom teachers and teaching artists through the course of three surveys suggests that it is a highly effective approach, and a model that deserves to be replicated and expanded.

Open Dream Ensemble is an outreach program of the University of North Carolina School of the Arts and a project of the Thomas S. Kenan Institute for the Arts. Since 2005 Open Dream has carried out 37 arts-integrated school residencies throughout North Carolina and performed for 164,000 students throughout the southeast. Recurring requests for deeper engagement with teachers led to the creation of the Open Dream Ensemble Teaching Artist Partnering Project. This project paired teaching artists and classroom teachers in order to:

- develop strategies for teachers to use the performing arts as a platform for integrated instruction;
- create an opportunity for artists to deepen their teaching artistry through a better understanding of the standards and school culture;
- establish effective collaboration between classroom teachers and teaching artists.

This report focuses on the findings of the Teaching Artist Partnering Project from the vantage points of the classroom teachers and the teaching artists.

From January through June 2014, three Open Dream Ensemble teaching artists collaborated with eight Winston-Salem teachers in co-creating and co-teaching ten arts-integrated lessons for each of the teachers' classes. For the purposes of this report, a teaching artist is defined as a professional artist who has training and experience integrating non-arts standards with arts standards in order to deliver arts-integrated instruction in the public schools.

The purpose is to:

- To help deepen the practice of arts-integration in two Winston-Salem public schools;
- To establish UNCSA as a leader in arts-integration;

- To lay the groundwork of a potential long-term partnership between UNCSA / Open Dream and local schools;
- To create an innovate model of arts-integration teaching and learning;
- To make measurable impact in teacher instruction and teaching artist growth.

The eight participating teachers were selected based on the following criteria: 1. They were faculty members at Hall-Woodward Elementary or The Downtown School and had experienced an Open Dream residency in their classroom in the fall of 2013. 2. They expressed an interest in better understanding and utilizing arts-integration in their classroom. 3. They were willing to take on the additional planning and instruction time that collaborating on lessons requires. 4. They agreed to document their process through three surveys. The surveys would be given at the beginning, mid-point, and conclusion of the project and be a combination of Likert (1-5) and narrative responses.

The three teaching artists were selected based on the following criteria: 1. They were artists of professional standing. 2. They were trained and experienced teaching artists with an interest in deepening their skills and collaborating with classroom teachers. 3. They were graduates of UNCSA in dance, drama, and music. 4. They agreed to document their processes in a format similar to the one used by the classroom teachers.

Expectations included: 1. The Open Dream teaching artist and classroom teacher would meet every week to plan and implement a lesson. 2. Each lesson would be 45 minutes in duration and connect one non-arts standard to a grade level arts standard. 3. The classroom teacher would select the non-art content. 4. While the first lesson would primarily be created and implemented by the teaching artist over the course of the ten lessons the classroom teacher would take on more of the arts-integrated creation and implementation. By the tenth lesson, the classroom teacher would create and instruct the arts-integrated lesson with the teaching artist offering support.

The Teaching Artist Partnering Project took place in two Winston Salem schools: The Downtown School is a pre-K – grade 8 charter school in downtown Winston-Salem. Students are chosen through a lottery and the school enjoys a stellar reputation and long waiting list of potential students. It features small class sizes, high parental involvement, and a diverse student body. It has a music teacher and parent volunteers who provide instruction in visual art. On the 2013 End-of-Grade (EOG) tests, 67.8% of Downtown School students tested at grade level in reading and 67.8% tested at grade level in math. Hall-Woodward Elementary School is a

pre-K – grade 5 public school in east Winston-Salem. It is a Title 1 school with a majority of its students receiving free and reduced lunch and breakfast. It has music and visual art teachers on staff. On the 2013 EOG tests, 17.7% Hall-Woodward students tested at grade level in reading and 28.4% tested at grade level in math. Hall-Woodward’s student population is approximately 75% Hispanic (many English Language Learners) and 25% black.

Eight teachers at two schools (four from each school) were selected to participate in the Teaching Artist Partnering Project. The participating teachers’ ability to implement arts-integration in their instruction and their comfort level in collaborating with teaching artists increased throughout the process. The teachers were consistent in their belief that students can learn non-arts standards through the arts and that arts integration impacts student attitudes.

Based on input from the participants, the following should be considered if this project continues:

- Begin the work in the fall and possibly expand it to 15 sessions.
- Allow grade-level teams to actively participate; including through observations of what other classrooms are doing.
- Devise a way to measure student learning and attitudes.
- Further formalize the project so that the work is more focused.
- If possible, bring in school-wide arts-integration training.
- Set up required weekly meeting times between the artists and teachers that are fixed.
- Be flexible with the length of the sessions.

By using the arts to make the standard curriculum immediately engaging and memorable, Open Dream Ensemble has impacted learners throughout the state. Harnessing the incredible power of the arts to enliven other content areas, the Open Dream Ensemble Teaching Artist Partnership Project increased skills in both the teachers and teaching artists. As an outreach program of UNCSA, this project created a new avenue to reach students and teachers through arts-integrated opportunities. As these teachers continue to use the techniques and experiences they gained in this process, their students will continue to benefit for years to come.

While there are variables to how this important work can be constructed and delivered, it is a potential avenue for community engagement for UNCSA. The teachers’ comments show the tremendous impact this process had on them and on the 150 students served through the project. The development of the teaching artists demonstrates that deepening their practice through leadership and collaboration with a classroom teacher has measurable benefits. This

model has the possibility of expanding the impact of the arts and it is within our reach to continue and develop. It deserves our best efforts on its behalf.

## UNCW: Miracle League

Accessible Coastal Carolina Events Sports and Services (ACCESS) was started to bring a Miracle Field to the Wilmington area. The board is composed of professionals, parents and consumers who advocate for accessible facilities and programs. UNCW Provost Denise Battles, Charles Hardy, dean of the College of Health and Human Services, and UNCW associate professor Dan Johnson signed a Memorandum of Agreement establishing a formal relationship between UNCW and Coastal Carolina Events Sports and Services (ACCESS) of Wilmington.

This new partnership put in motion a way in which UNCW could develop programs for students that will include volunteer work, service learning and community engagement. "UNCW is all about serving individuals, families and communities in Southeastern North Carolina," Hardy said. "We are committed to the health and well-being of this region."

Founded in 2008, ACCESS is a non-profit organization that provides accessible recreational activities to persons with disabilities while creating an environment that is inclusive to people of all abilities. As ACCESS chair, Johnson led a collaborative effort to open the Miracle Field and Playground last August at Olsen Park. "This is the only Miracle Field in the nation partnering with a university and working with a recreation therapy program," Johnson said. "We're going to become a national model for extraordinary things."

ACCESS exists to provide an opportunity for those who have not yet had the chance to experience the power of play and the joy of sports and to show the importance of inclusion within a community. Battles noted that the university's programming will include youth sports, opportunities for wounded warriors and activities for senior citizens.

The Miracle League of Wilmington recently won the 2014 Group Achievement Award from the Providers' Association, a North Carolina organization that provides group homes for individuals with intellectual disabilities. "This award came as a surprise to us; we did not know that the Cape Fear Group Homes had nominated us," Dan Johnson, associate professor of recreation therapy and chair of ACCESS, said, "We have been blessed to work with many of their residents and have gotten to enjoy their improvement and excitement with Miracle League baseball."

"A dad who has two children with Down's Syndrome told me: 'This place says we're valued.' I couldn't sum it up any better than that," Johnson explains. "That's what it says for the whole community - everyone is valued."

In addition to the playing field, a specially designed playground was built as well. This has been accomplished with many volunteer hours provided by faculty, staff, students and members of the surrounding communities. The Kiwanis Miracle Playground is the largest accessible playground in the southeast. Earlier this year, 150 volunteers came out for playground build day. The playground was funded with a combination of Wilmington and New Hanover County bond funds, donations from the local Kiwanis Club and Wilmington Believes in Miracles campaign.

Dr. Johnson is working with other UNCW faculty on a grant proposal to develop health and wellness programs for people with disabilities that will build on the public-private partnerships formed during construction of the field and playground. He envisions research and applied learning opportunities for faculty and students in nursing, sociology, exercise science, special education and other fields. UNCW students already volunteer on-site. These efforts will fit within larger community health initiative spearheaded by the College of Health and Human Services under the leadership of Dean Charles Hardy.

With the field and playground as a resource, Johnson is eager to create recreational opportunities for as many people as possible - he sees future sports programs for adults in wheelchairs, nursing home residents and Wounded Warrior athletes. For Johnson, the Miracle Field and Playground symbolize the Wilmington community's commitment to diversity and inclusion.

- <http://www.uncw.edu/articles/2014/05/uncw,-access-form-partnership-to-offer-programs-at-the-miracle-field.aspx>
- <http://www.uncw.edu/13/articles/miraclefield.html>
- <http://miracleleaguewilm.org/photo-gallery/>

### WCU: Helps small mountain tourist town survive and revive

Hope. That's what Western Carolina University gave the small tourist town of Dillsboro, North Carolina when it partnered with town leaders and merchants in 2009 to help bring the town back from the brink of economic disaster.

"What WCU gave us in very desperate times was the hope to hang on a little bit longer. There was a lot of us that wondered how long we were going to be here," said a Dillsboro merchant

participating in a March 2014 focus group to evaluate the impact of the Dillsboro/WCU Partnership. “They tied a knot at the end of the rope,” another participant concluded.

In fall 2009, WCU entered into a formal partnership with Dillsboro in response to two events occurring simultaneously: 1) The Great Smoky Mountains Railroad (GSMR), which had attracted approximately 50,000 tourists annually to Dillsboro, moved its headquarters to a neighboring town approximately 17 miles away in a different county and 2) the national economy tanked. It was the perfect storm. Town leaders described the situation in Dillsboro as “dismal.” Many businesses had closed their doors and many that remained struggled.

A faculty member was appointed special assistant to the chancellor for Dillsboro and asked to chair the Dillsboro/WCU Partnership Committee, a group comprised of Dillsboro merchants and leaders and faculty and staff. The goal of the Dillsboro/WCU Partnership is to match WCU expertise/resources with Dillsboro’s challenges and opportunities to help the town survive/revive.

Since January 2010, WCU has collaborated on numerous projects involving dozens of faculty/staff and hundreds of students across many departments and disciplines. These projects have ranged from small business counseling to an interdisciplinary effort to create/promote a mobile web application to the expansion of existing special events, a critical element of the town’s tourism-based economy. WCU has provided thousands of volunteer hours and generated, through grants and sponsorships, thousands of dollars to support projects. Additionally, “in-kind” donations of professional services—like graphic design work through WCU’s Office of Creative Services/Print Shop; radio announcing and airtime on WWCU-FM; video production, editing and delivery to online and broadcast media—are also worth tens of thousands of dollars.

Although the recovery is far from complete, in addition to “hope,” the Dillsboro/WCU partnership has resulted in numerous economic benefits to date, including:

- In spite of rain and high winds, more than 700 people attended “WCU Night at the 2013 Dillsboro Lights and Luminaries,” an event planned and implemented by WCU faculty and students in Communication/Public Relations, Hospitality and Tourism, Music and Dance and supported by funding from the Office of Undergraduate Studies and the A.K. Hinds University

Center. Dillsboro Mayor Mike Fitzgerald concluded that WCU's work "led this festival to unprecedented growth, resulting in several merchants reporting December 6, 2013 as their most successful day since the economic downturn."

Professors from the departments of Economics, Hospitality and Tourism and Communication/Public Relations continue to assist the town in its effort to bring the train back to Dillsboro. A 2013 WCU economic impact study projected that the GSMR's proposal to once again originate steam service out of Dillsboro could generate \$26 million annually in revenue for Jackson County. This study served as the foundation for a communication campaign to persuade Jackson County Commissioners to help fund the GSMR's return. Efforts on behalf of the train are ongoing and Dillsboro leaders are optimistic an agreement can be reached.

Three new businesses opened in Dillsboro in 2013, a craft brewery is expanding its operations to the town, and a Business Plan Competition, co-organized by WCU and Southwestern Community College in spring 2014, generated proposals from six hopeful entrepreneurs. Significantly, a new principal investor in the town's anchor, The Jarrett House Inn and Restaurant has renovated the restaurant, is opening a new gift shop, and plans to extensively renovate and expand the historic property, which was established in 1884 and is on the National Register of Historic places.

The Dillsboro/WCU partnership has been identified as the "engine" driving this recovery. As a Dillsboro merchant surmised during the focus groups, "...people are viewing Dillsboro as a place to reinvest in. And that is what WCU has done for us."

In addition to the economic benefits, there have been other important outcomes, including improved working relationships among the town's merchants. As one focus group participant put it, the partnership "has brought us together. We have leadership now. And it's teamwork." Participants agreed this was not the case before WCU became involved. "It created a new mindset. We pulled together with WCU. It pulled us together."

Perhaps, most importantly, however, is the conclusion that WCU has helped the town build its own capacity to thrive. "WCU prepared us to continue. They've left the building blocks for what we need to keep going forward," another focus group participant surmised.

While this partnership has significantly impacted Dillsboro, it also has helped WCU realize its mission as a regionally engaged university. Dillsboro has served as a learning laboratory for students from numerous disciplines enabling them to develop portfolio materials and to parlay their real-world experiences into actual jobs. Surveys of public relations alumni who worked in Dillsboro as students indicate that they continue to serve their communities, suggesting that the emphasis on citizenship and social responsibility, a key component of WCU's Quality Enhancement Plan, has "stuck." As Katie Wiegel, a public relations student, put it: "Being linked with the merchants of Dillsboro for an entire semester helped build relationships where it didn't necessarily feel like an obligation or just another class project. It became very real and we began to genuinely care about the success of the community and our campaign."

Although the formal phase of the Dillsboro/WCU partnership is winding down, given the strength of the relationships that have been developed over the last five years, individual faculty members will undoubtedly continue collaborating with Dillsboro merchants.

Links to selected publicity about the Dillsboro/WCU Partnership:

- [http://wncmagazine.com/feature/hometown\\_spirit\\_0](http://wncmagazine.com/feature/hometown_spirit_0)
- <http://news-prod.wcu.edu/2013/06/events-students-faculty-and-staff-helped-plan-win-international-awards/> View video of mobile website app launch at: <https://www.youtube.com/watch?v=M6R2y5HLnqY>
- Visit mobile website at: <http://mobile.dillsboroplaces.org/>
- <http://www.youtube.com/watch?v=KVWWf2Itoll>

## WSSU: RAMS Know HOW (Hands on Wellness) Mobile Unit

Many black colleges and universities, including Winston Salem State, are located in neighborhoods where the poverty, unemployment, and uninsured rates are above average, and residents often have limited access to healthcare services. Mobile clinics can provide vital health services and in the convenience of neighborhoods where transportation may not be readily available. It can reduce the use of emergency rooms, especially when illnesses are identified and treated early.

A challenge to providing health services in low-income communities is limited access to a stationary clinic. Mobile clinics answer this challenge, reaching residents of rural and remote areas where access to healthcare services are limited. Studies have shown that the use of a

mobile health clinic in medically underserved urban communities can reduce risks for various health disparities, such as strokes and myocardial infarctions through preventive services blood pressure screenings.

The RAMS Know H.O.W. (Hands on Wellness) mobile unit of the School of Health Sciences (SOHS) at Winston-Salem State University (WSSU) was donated and funded by Novant Health's Forsyth Medical Center. The mobile unit provides wellness services including blood pressure, diabetes, cholesterol screenings, height and weight measurements, body mass index, health referrals to local free and nominal cost clinics, and health education. The mobile clinic provides services to health disparity identified zip codes in the East Winston area: 27101, 27105, 27106, 27107, and 27110.

The Mission of the Rams Know H.O.W Mobile Unit is to provide quality, accessible, and integrated preventive wellness services to reduce health disparities. The **Vision** of the Rams Know H.O.W. Mobile Unit is to become the premier health connector provider and advocate for under-served and underrepresented populations of Forsyth County; to educate and produce culturally competent healthcare professionals; and to operate a student-lead mobile unit that fulfills the motto of our University.

Now entering its fourth year of operation, the mobile clinic has provided service to over 4, 000 residents of East Winston and surrounding areas in Winston-Salem, Forsyth County. The participation of WSSU faculty, staff, and students continues to play an integral part in providing health care services in the communities. In the Fall of 2012, the mobile unit began providing weekly stationary screenings at various locations, such as East Winston shopping center and Samaritan Ministries, within health disparity identified zip codes in Winston-Salem. Since the accumulation of the screening events, the number of patients seen on the mobile unit has doubled and many have returned for follow up services.

This initiative has blossomed to increased requests for the mobile unit and has begun to have a true presence of WSSU giving back to the community that has given so much to our campus and students. Additionally, it is one of the many initiatives for the mobile unit to continue to address the issue of and eliminate health disparities. Starting in 2013, the mobile unit has begun its outreach via social media (i.e., Facebook and Twitter) to get the community involved and increase the marketing of the screening events and other health news. In addition, the mobile

unit is in partnership with the School Health Alliance for Forsyth County to address wellness and mental health of adolescents in Forsyth County.

The RAMS Know H.O.W. provided more than \$300,000 (1:21 dollar invested vs. value returned) in free healthcare services, possibly reducing health disparities, the strain on local emergency departments, and uncompensated care at local hospitals. Through the efforts of the mobile unit, additional findings were reported for the residents Forsyth County. Throughout the four years of operations, the majority of those visiting the mobile unit were female (62%), and of African American descent (82%). Half of the clients were underinsured (21%) or did not have any form of insurance (29%). The recorded health outcomes included: 74% were overweight or obese, 63% were either pre-hypertensive (41%) or hypertensive (22%) (Based on JNC standards), and 49% had elevated blood glucose levels, and 23% had high values for total cholesterol.

## Appendix C: Rationales and Why Specific Measures are Useful

### Measures 1.1 (Student Participation in Community-Based Academic Learning), 1.1a (Student Participation in Community-Engaged Academic Learning – if applicable)

Using the Registrar's data, one can track the number and proportion of students participating in community-based courses and entrepreneurship-focused courses thereby demonstrating the pervasiveness of these types of learning experience.

Tracking participation is useful because it:

1. provides a specific data measure that can provide reliably accurate numbers and remove duplicates if the
2. participation numbers are connected to enrollment in courses (track students through the registrar's office);
3. indicates the extent to which students are exposed to this type of experience – and can allow for comparable data across years to see whether more or fewer students are participating, thereby enabling the development of well-informed target measures;
4. indicates, to some extent, the extent to which faculty and staff are teaching through community-based experiences, and;
5. uses enrollment data to analyze trends, answer meaningful questions, dispel “myths” about who is and who is not involved in these types of courses, and address gaps with regards to enrollment in such high impact pedagogies.

Using student identification numbers pulled from the census enrollment data, it is possible to also pull other helpful data for frequencies and cross-tabs analyses, including the following:

1. Gender
2. Ethnicity/Race
3. Major
4. Class (based on credit hours
5. Birthdate
6. Course descriptor (SVL, INT, CLN, etc.) – if SVL is tracked, then we can pull this out separately
7. Faculty member teaching course
8. Department in which course is offered

Measure 1.1a is a subset of 1.1. While there is great value, short- and long-term, to university and community collaborators for student involvement in and with the community, it is important to begin to understand the qualitative differences between these experiences as the learning goals and outcomes vary. For example, developing civic attitudes and habits is an expressed outcome of the majority of service-learning courses, but is not necessarily an expressed value

of all internships. Internships frequently have a greater emphasis on and explicit goals for career clarification, readiness, and post-graduation placement.

Each engages students in the community but for different purposes. While UNC does not currently have a system to demonstrate the outcomes achieved by UNC students as a result of their community-based course activities, one can rely on national research that demonstrates that academic community-engaged learning is a high impact practice that, when implemented in ways that uphold the key attributes of the practice (duration, reflection, connecting academic concepts to service, direct service, and others), yield student outcomes related to degree completion, career exploration, and citizenship (specifically, academic engagement, higher retention, higher GPA, career clarification, more likely to complete degrees, deepening connections to faculty, civic values and participation after graduation). In the future, research may be done at individual campuses or across the system to demonstrate the connection between types of engaged experiences and specific student outcomes.

Collecting data on community-engaged and community-based experiences across campuses encourages research to determine (1) the value of academic community-engaged service based on best practices, and (2) the value of academic community-based and community-engaged service to the community partner. This second area of research is important to understanding the impact of academic-based student service to communities across North Carolina. This work is under-represented in the literature. The Carnegie 2010 Documentation Framework, and the 2015 edition, asks for data on curricular engagement. In addition to the items below, in 2015, Carnegie will be asking for campuses to report (1) the mechanisms for collecting data, and (2) how often it is collected. The following is copied directly from the Documentation Framework (in italics).

Curricular Engagement describes the teaching, learning and scholarship that engages faculty, students, and community in mutually beneficial and respectful collaboration. Their interactions address community identified needs, deepen students' civic and academic learning, enhance community well-being, and enrich the scholarship of the institution.

NOTE: The terms community-based learning, academic service learning, and other expressions are often used to denote service-learning courses.

- a) Does the institution have a definition and a process for identifying Service Learning courses? Yes No  
Describe requirements:
- b) How many formal for-credit Service Learning courses were offered in the most recent academic year?  
What percentage of total courses?  
How many departments are represented by those courses?  
What percentage of total departments? \_\_\_\_\_
- c) How many faculty taught Service Learning courses in the most recent academic year?  
What percentage of faculty?
- d) How many students participated in Service Learning courses in the most recent academic year?  
What percentage of students? \_\_\_\_\_

### Measure 1.2 (Formal Entrepreneurial Education Efforts)

Students increasingly look to create their own jobs rather than to work for an existing company. Trends will be used to demonstrate students' progressive mindset towards entrepreneurship, and the university's response to filling this need.

### Measures 1.3 (Education Pipelines Focused on Health and Wellness) and 1.4 (Education Pipelines Focused on preK-12)

Demonstrates the importance that a trained workforce has on influencing and enhancing the recruitment and development of a strong health and wellness system and industry in NC. Reinforces the impact that an effective and recognized preK-12 education system has in defining the amplifying status of NC as a place to live and do business.

### Measure 1.5 (Job Placement, Earning Rates, and Retention in North Carolina)

This measure indicates the successful contribution of university graduates to the state of North Carolina. North Carolina Department of Revenue data can demonstrate the extent to which students get jobs, receive salaries, and pay taxes in North Carolina after they graduate from a UNC institution. This measure can also provide an indication of the State's return on investment in the UNC system, specifically, in the form of graduate involvement and contributions to the economic well-being of communities and the state.

### Measures 2.1 (Total Sponsored Research Invested In by Any Sector), 2.2 (Total Sponsored Research Invested In by North Carolina Organizations), 2.3 (North Carolina Community Involvement in Sponsored Projects)

**How data will be collected:**

- For Measure 2.1, GA will use RAMSeS and accept all sponsor categories
- For Measure 2.2, GA will use RAMSeS and accept all NC sponsor categories.
- For Measure 2.3, GA will use RAMSeS and accept NC sponsor categories as proxies for community participation – State and Local Government (NC), Non-Profit Organizations (NC); Foundation (NC)

NOTE: In the future, GA may request that the RAMSeS council consider increasing the functionality of this tool to identify all community-engaged sponsored projects, beyond those captured by the two sponsor categories by adding the following fields to RAMSeS:

1. Add Carnegie definition of community engagement on general IPF screen with checkbox (Y/N) option. ECU adapted the Carnegie definition for SEDONA box.
2. Ask users to estimate what percent of budget supports community engagement (provide number).

This data could be used in conjunction with REACH NC to analyze community engagement activity by concept, instead of including separate questions about K-12, adult education, etc.

**Why these measures are useful:**

- Demonstrate trends from NC local government funding sources – show local investment in our universities as the research and development and implementation arm of the government and nonprofits
- Demonstrate cost share by UNC institutions on sponsored projects conducted with Local NC Government, NC Non- Profit Organizations as subcontracts on UNC sponsored projects
- Understand trends such as changes in geographic distribution and concentration of funded research/projects across NC counties; changes in or diversification of funding sources for NC-based or focused research/programs; and changes in activity types or community benefits.

**Using this measure, one could also capture data on:**

- Activity type (CHESS code) – research, instruction, public service, physical plant, student services, etc. (Note: only one activity type can be selected)
- Sponsor (funding agency) – over 15,000 funding agencies currently listed in database, all are categorized as either Federal, State, Local Gov., Non-Profit, Foundation, Industry, etc., and whether sponsor is NC or international (is national also an option?)
- Investigators/Units – names, units of lead PI, PI, co-PI, other investigators; for UNC investigators only
- Budget: parsed by activity/location (county, state, country) but not by activity type because only one CHESS code selected. Can report on amount of cost share by an internal unit(s)
- Subcontractors – uses same list as Sponsor (funding agency)
- Community Benefits – does the work promote economic development, health, K-12, adult ed, UNC Tomorrow themes

## Measures 3.1 (Community-University Projects), 3.2 (Community Partners)

### Why these measures are useful:

- SACS reaffirmation requires campuses that have service in their academic mission to demonstrate evidence of meeting that mission through intentional efforts, evidence of the evaluation of those efforts, and evidence that those evaluations are used to improve effectiveness in achieving the stated mission. This is a new area – and it is an area in which most campuses are weak.
- Additionally, Carnegie Foundation classification for community engagement requires this campus-wide comprehensive information about partnerships and projects. Eleven of the 17 campuses have this designation as of 2012 and many will need to re-apply in 2014.
- Few campuses have a full understanding of the portrait of community engagement on their campuses. Once we have the portrait, then we can begin to strategically plan, using data to identify current strengths, as well as potential areas for growth. This information can serve efforts by individual institutions, as well as UNC GA to strategically plan and support community-university partnerships using a robust data set rather relying solely on anecdotes.
- The information above would allow campuses to respond quickly and efficiently to external requests for projects according to focus, activity type, or even county. Currently, these requests require an extraordinary number of personnel involvement and collective time, detracting from core activities.

## Measure 4.1 (Continuing Education and/or Professional Development Experiences)

UNC system campuses offer opportunities for continuing education and lifelong learning through courses and programs outside of degree-granting programs. These are essential for individuals and organizations wishing to improve the skillsets needed for a 21st Century workforce.

Opportunities for lifelong learning are essential for quality of life for residents who may not be focused on gaining professional or career skills, but rather, on developing and/or advancing personal interests and passions.

## Measure 4.2 (Community Participation in UNC-Sponsored Events and Media Presentations)

- Particularly in rural areas with smaller populations and fewer industries and employers, university-sponsored events provide an important aspect of quality of life. This measure provides an indication of the impact that campuses have in attracting and retaining graduates and attracting businesses to a community. While certainly not the sole provider of community events, universities provide important opportunities for entertainment and cultural appreciation that would not otherwise be available.

- Indicates potential for economic growth generation, either directly or indirectly, through events and venues
- Indicates the generation of commercial non-university entities to support events.

### Measure 5.1 (Collection of Community Engagement and Economic Development Success Stories)

While other metrics (1-4) provide impressive numbers and a general indication of progress towards community engagement and economic development across UNC campuses and North Carolina community, success stories provide a richer illustration of the true integrity and importance of community and economic engagement efforts. Publicizing these types of endeavors and their outcomes can generate a profound appreciation and recognition for the UNC System's contribution to the community and also its economic welfare. These exemplary projects, programs, and initiatives bring a value-added to the community that would not likely be available otherwise.

Exemplary projects, programs, and initiatives will be used by GA to share the success of campuses in various ways. These stories, for example, will be shared in [UNC@Work](#), an e-newsletter hosted by UNC General Administration dedicated to sharing the ways in which UNC campuses are contributing to the community and economic development of North Carolina.

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Thanks to all of the participants in the effort. We hope that this report can set the stage for our campuses to achieve new levels of engagement in the economic and community health of our state.

-Leslie Boney, April 2015